IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

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IN RE: REMBRANDT TECHNOLOGIES, LP PATENT LITIGATION	: MDL Docket No. 07-md-1848(GMS)
MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC., THOMSON, INC., AMBIT MICROSYSTEMS, INC., and NETGEAR, INC., Plaintiffs, v. REMBRANDT TECHNOLOGIES, LP, REMBRANDT TECHNOLOGIES, LLC, d/b/a REMSTREAM, Defendants.	: Civil Action No. 07-752-GMS
REMBRANDT TECHNOLOGIES, LP, and REMBRANDT TECHNOLOGIES, LLC, LLC, d/b/a REMSTREAM, Counter-Plaintiffs, v. MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC.,	:

(Caption Continues on Page 2)

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Wilmington, Delaware
Tuesday, August 5, 2008
9:30 a.m.

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BEFORE: HONORABLE GREGORY M. SLEET, Chief Judge

THOMSON, INC., AMBIT MICROSYSTEMS, INC., NETGEAR, INC., TIME WARNER CABLE LLC, TIME WARNER NY CABLE LLC, TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP, TIME WARNER ENTERTAINMENT COMPANY, LP, COMCAST CORPORATION, COMCAST CABLE COMMUNICATIONS, LLC, COXCOM, INC., CSC HOLDINGS, INC., CABLEVISION SYSTEMS CORPORATION, ADELPHIA COMMUNICATIONS CORPORATION, CENTURI-TCI CALIFORNIA COMMUNICATIONS, LP, CENTURY-TCI HOLDINGS, LLC, COMCAST OF FLORIDA/PENNSYLVANIA, L.P.(f/k/a PARNASSOS, LP), ADELPHIA CONSOLIDATION, LLC, PARNASSOS HOLDINGS, LLC, WESTERN NY CABLEVISION, LP, SHARP CORPORATION and SHARP ELECTRONICS CORPORATION,	:
Counter-Defendants.	:

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APPEARANCES:

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:32:34 **THE COURT: Good morning, counsel.**

:32:37 **(Counsel respond "Good morning.")**

:32:39 **THE COURT: Please be seated.**

:32:45 **Mr. Seitz, do you want to start it off.**

:32:48 **MR. SEITZ: I would love to.**

:33:02 **Good morning, Your Honor. We are going to spend the next couple of days talking about modems. I have the privilege of going first. I think counsel has agreed on a protocol on how we are going to handle the patents.**

:33:15 **THE COURT: I wanted to discuss that.**

:33:17 **MR. SEITZ: If that is okay with you.**

:33:19 **Would you like to go first?**

:33:20 **THE COURT: I would like to hear from counsel. First, why don't we start out with a round of reintroductions.**

:33:26 **MR. SEITZ: For sure. With me at counsel table is J.C. Rozendaal, from the Kellogg, Huber, Hansen, Todd,**

:33:34 **Evans & Figel firm in Washington, D.C. J.C. and C.J. will**
:33:38 **be dividing up the presentations and try to keep it**
:33:41 **straight.**
:33:41 **Frank DiGiovanni is with me from my firm as**
:33:44 **well.**
:33:44 **There are a number of lawyers for either side in**
:33:47 **the back.**
:33:47 **THE COURT: Just a few.**
:33:49 **MR. SEITZ: I think we will skip those**
:33:52 **introductions.**
:33:52 **MR. DESMARAIS: Good morning, Your Honor. John**
:33:54 **Desmarais from Kirkland & Ellis.**
:33:57 **THE COURT: Would you like to do the**
:33:58 **introductions, counsel?**
:33:59 **MR. SHAW: Good morning, Your Honor. John Shaw**
:34:01 **from Young Conaway for the equipment vendor defendants.**
:34:05 **John Desmarais from Kirkland & Ellis will be presenting**
:34:07 **through the two days. Eric Lamison from Kirkland & Ellis.**
:34:10 **Daniel Reisner from Kaye Scholer. And Jeff Castellano from**
:34:16 **Young Conaway.**
:34:16 **THE COURT: Good morning. All right.**
:34:18 **Mr. Seitz, do you want to start off and talk**
:34:20 **about process a little bit.**
:34:22 **MR. SEITZ: Yes. We conferred before the**
:34:25 **hearing. It was our view that the patents could be, four of**

:34:31 **the patents could be combined into two presentations. We**
:34:35 **have agreed to do that. That would be the '631 and '761**
:34:41 **patents, on which we would go first. And then the '159 and**
:34:47 **'234 patents would be combined as well. And the others we**
:34:51 **would take separately.**
:34:53 **If it is acceptable to Your Honor, what we would**
:34:55 **do is, start with a brief introduction, I would say, to the**
:35:00 **technology, and introduce the patents, then I would turn it**
:35:04 **over to their side to the extent they have an introduction.**
:35:09 **Then we would jump into the '631, '761, do that.**
:35:14 **The other side would respond. To the extent there is any**
:35:16 **cleanup after that, we would do that, and then move on to**
:35:19 **the next step. If that is acceptable.**
:35:21 **THE COURT: The other side agrees?**
:35:22 **MR. DESMARAIS: Yes, Your Honor.**
:35:23 **THE COURT: It seems like a reasonable process.**
:35:26 **I am prepared to adopt it.**
:35:27 **Before you start, Mr. Seitz, just a couple of**
:35:30 **thoughts, maybe one small admonishment. As everyone in this**
:35:36 **courtroom knows, there are an awful lot of terms at issue.**
:35:41 **I know the parties have been meeting diligently and**
:35:46 **conferring to try to narrow the field. I have the**
:35:49 **impression from the briefing that there has been a good bit**
:35:53 **of distance closed between the parties. It seems like on**
:35:57 **some of the terms there is just a small amount of**

:36:00 **difference. I would suggest additional effort, rather than**
:36:06 **continuing to burden this Court with having to engage the**
:36:12 **process for terms that the parties could probably reasonably**
:36:16 **work out.**
:36:17 **In addition, it's going to take longer than**
:36:22 **normal, my normal 30 days. You should not expect an order**
:36:26 **for, it will be about 90 days before I get the order out.**
:36:32 **With that, I am ready to go.**
:36:34 **MR. SEITZ: Okay. Your Honor, on that issue, we**
:36:37 **just have a couple of slides on the number of claim terms we**
:36:42 **would like to just start with. We do have quite a distance**
:36:50 **on the number of claim terms. As I understand it, for**
:36:52 **instance, there is rules in California where regardless of**
:36:54 **the number of patents you are asserting, you basically get**
:36:57 **ten terms and that is it. That, to us, might seem like some**
:37:03 **reasonable process, where the parties need to limit the**
:37:05 **number of claims that they are going to come into court**
:37:11 **with.**
:37:11 **What I have shown you in this first slide, Your**
:37:13 **Honor, is just on the eight patents, we had proposed 29**
:37:17 **claim terms to be construed, and the defendants had proposed**
:37:20 **119. I think, as you will see, Your Honor, as you go**
:37:24 **through the claim charts, some of the constructions they ask**
:37:27 **are basically terms within terms, and then they became**
:37:30 **phrases --**

:37:31 **THE COURT: Actually, my clerk and I were**
:37:33 **talking about that. We found that rather interesting, I**
:37:36 **will use that term.**
:37:37 **MR. SEITZ: When you do terms within terms and**
:37:40 **then phrases within terms within terms, it tends to multiply**
:37:44 **the claims. That's how you get to the 119 that the**
:37:47 **defendants have proposed.**
:37:48 **Just a gauge of reasonableness, if we look,**
:37:52 **there were three patents that were construed in Texas, in**
:37:56 **the Texas Markman hearing. The Court ended up construing 25**
:37:59 **claim terms in Texas. Rembrandt has proposed 19 of those**
:38:05 **claim terms to be construed here. And if you look at the**
:38:08 **final column, now that we are away from Texas and in**
:38:13 **Delaware, the defendants have added additional terms. We**
:38:16 **are now up to 57 terms.**
:38:17 **THE COURT: I found that remarkable, because I**
:38:20 **thought everything was supposed to be bigger in Texas, and**
:38:23 **now we are here. But go ahead.**
:38:25 **(Laughter.)**
:38:25 **MR. SEITZ: Again, the point, if you are looking**
:38:27 **for a gauge of reasonableness, I think we are a little heavy**
:38:31 **on the defendants on the request for claim terms.**
:38:34 **Just as another gauge of reasonableness, Your**
:38:36 **Honor, if Rembrandt just said -- I think what the defendants**
:38:40 **will get up and say is, Rembrandt, you have asserted too**

many claims, and that's why we need to construe all these terms.

Well, just to give the Court a perspective on that argument, if Rembrandt limited the case to Claim 1 of each patent, just one claim -- and certainly, we can't do that at this stage in the case because we are still developing the infringement arguments -- and that said, it would be foolish enough to do, for us to do that. Just as an example, if each of the patents was limited to Claim 1, the defendants would still require that 61 claim terms would be construed, where we would only construe 17.

I just wanted to give the Court some perspective on which party was adding the additional claim terms. Certainly, we hear Your Honor's admonishment that the parties need to do some work on this.

THE COURT: Ultimately, Mr. Seitz, what I will say at the end of the day is a pox on both your houses. But I understand your point.

MR. SEITZ: Thank you, Your Honor.

Before we jump into the technology, I think it might be helpful to distribute the notebooks that we are going to be using.

THE COURT: Sure.

MR. SEITZ: We had two choices, Your Honor. We could have given you separate notebooks for everything or we

:40:09 **could give you one and add to it. Hopefully, we are just**
:40:12 **going to be additive. When we get further along in the**
:40:15 **patents, we will hand up to the Court things to snap into**
:40:18 **the binder. I hope that's not inconvenient. I think it's**
:40:22 **better than handing you eight notebooks. You will have one**
:40:24 **or two handy there.**
:40:26 **THE COURT: That is fine. Let me have a word**
:40:28 **with my chief deputy for a moment.**
:40:31 **(Pause.)**
:40:44 **MR. SEITZ: So just as an introduction to the**
:40:48 **technology, the technology of the eight patents that we are**
:40:52 **dealing with here deal with modem technology. Your Honor**
:40:58 **may be familiar with modems. We are going to start with**
:41:00 **just a few slides that tell you what modems are all about**
:41:03 **and how they work.**
:41:06 **In this depiction, the goal is for computers to**
:41:10 **be able to talk to each other. It could be computers. It**
:41:13 **could be phones. It could be any number of things. And**
:41:17 **computers talk in terms of digital information, 0s and 1s.**
:41:22 **So the question is, how do you get the 0s and 1s from one**
:41:27 **computer to another?**
:41:28 **Well, one way to do that is by the use of a**
:41:31 **modem. If we want to send a digital signal to another**
:41:35 **computer, there are any number of ways, which I will explain**
:41:39 **in a little bit. But one way is to use a modem to translate**

:41:42 **the digital information into an analog signal, so that it**
:41:46 **can be sent over the air, through the telephone lines,**
:41:50 **through the cable lines, to another modem, that then**
:41:54 **translates it back into digital information, and the**
:41:57 **computer on the other end can read it.**
:42:00 **Here we have a depiction of digital information**
:42:02 **going into a modem, and the modem converts that digital**
:42:07 **information into an analog signal. That is called**
:42:10 **modulation. And then it's sent across whatever transmission**
:42:16 **means are being used. As I said, it could be a cable**
:42:20 **system. It could be a telephone line. It could be the air.**
:42:23 **Whatever. But it needs an analog signal to send it through**
:42:26 **those mediums. Then a modem on the other end demodulates**
:42:31 **that analog signal, which converts the analog signal back**
:42:38 **into the 0s and 1s, and the computer on the other side can**
:42:41 **read the information.**
:42:42 **So, as I said, modems work to send information**
:42:45 **from computers over telephone networks. They work to send**
:42:51 **digital information by analog signal over cable networks.**
:42:56 **They work to send it over the air, by satellite, or**
:42:59 **whatever. But you have to change the digital information**
:43:01 **into an analog signal to send it over your pipe or through**
:43:06 **the air or whatever and then reconvert it back to digital**
:43:09 **information. That is what modems do.**
:43:11 **Modems here are everywhere. They connect every**

link on the Internet. They are the way that digital information gets translated into analog signals and then back again.

So how do analog signals represent digital information?

Well, an analog signal is what is called a carrier signal that's sent between the two modems. And a carrier signal basically can be sent through the air, can be sent on a cable line, can be sent on the telephone line. By changing the characteristics of that carrier signal, it can represent the 0s and 1s, which is digital information.

The way you change the carrier wave is you modulate it based upon frequency, amplitude, and phase. And I am going to show you that in a minute. Those are the three main ways that analog signals are used to represent digital information.

Here is an example of how frequency can be changed. For instance, if you look at the first drawing here on the left, a high frequency would have a high number of peaks passing between those two lines at one second in time, whereas a low frequency would have fewer number of peaks. That is changing the frequency of the carrier wave to represent digital information.

The amplitude is simply changing the height of the peaks. You can have a high amplitude to represent

:44:45 **something. You can have a low-amplitude representation of**
:44:49 **information.**
:44:49 **Or you can change the phase of the signal, the**
:44:51 **way the signal lines up. So a fully out-of-phase signal can**
:44:58 **represent digital information, as can partially out of**
:45:00 **phase.**
:45:01 **So how is it that the changes in the carrier**
:45:03 **wave represent digital information? Well, as you can see in**
:45:07 **this picture, a high frequency, a high number of peaks,**
:45:11 **passing in a given period of time can represent 1, and a low**
:45:17 **frequency can represent a 0. So here is how changes in the**
:45:21 **carrier wave represent digital information. Here is one**
:45:26 **way, by changing the frequency.**
:45:27 **Again, computers talk in terms of 0s and 1s. So**
:45:32 **we are talking about 0s and 1s or, as I will get to in a**
:45:36 **minute, collections of 0s and 1s, which are called symbols.**
:45:40 **For purposes of these examples, you can see how changing the**
:45:44 **carrier wave can represent a 1 or represent a 0, depending**
:45:50 **on how you change the frequency.**
:45:52 **So you can change the amplitude to represent 0s**
:45:55 **and 1s as well. Here you can have a low amplitude represent**
:45:57 **a zero, or a high amplitude represent a 1. And you can**
:46:03 **change the phase of the signal, is another way of doing**
:46:08 **here. If you see here, you can represent 1s and 0s by**
:46:12 **phase. But if you change the phase, so instead of that**

:46:16 **smooth pattern you just saw go by there are differences in**
:46:19 **the way the signal changes, those differences can represent**
:46:22 **1s or 0s.**
:46:24 **So just to introduce the nomenclature symbols**
:46:31 **for a minute.**
:46:32 **All the examples that I just showed you changed**
:46:36 **the frequency, changed the amplitude, or changed the phase.**
:46:40 **And those changes in phase, frequency, and amplitude**
:46:48 **represent the 0s and 1s.**
:46:49 **But if you want to send more than just 0s and 1s**
:46:52 **or have those changes represent more than 0s and 1s, you can**
:46:56 **have those phase changes or frequency changes symbolize more**
:47:03 **than one bit. For instance, a low amplitude here can**
:47:06 **represent two bits of information, two 0s, instead of just**
:47:10 **one bit of information, one 0. That way you can send more**
:47:14 **information.**
:47:15 **But these are called symbols. So this**
:47:19 **amplitude, this low amplitude is symbolic of two 0s instead**
:47:25 **of just one 0.**
:47:27 **You are going to hear the term symbols come up**
:47:30 **later on. Symbols are just simply a way of using one**
:47:33 **characteristic of the wave to represent more than just a 0**
:47:38 **or a 1. It represents a collection of 0s and 1s.**
:47:45 **So just to recap where we are. We have got**
:47:49 **modems translate digital information to an analog signal,**

and then back to digital information, so that computers can communicate. The way the analog signal carries the 0s and 1s is by changing its characteristic, or changing its frequency, changing the amplitude or the phase of the carrier wave.

What are some of the problems with sending that analog signal between modems? Well, one problem is noise. Noise can cause errors. Here is a modem sending the analog signal, and let's say there is a thunderstorm out there and it interferes with the signal. Well, let's suppose a 1 was sent by the original modem. Well, after the interference caused by the lightning storm, the receiving modem might think it's a 0 instead of the 1 because of the interference.

So noise caused by any number of things, it could be lightning, it could be radios, it could be the electric motor in your blender or whatever, interferes with the analog signal and can cause problems with the receiving modem interpreting whether it's getting a 1 or a 0 or mistaking a combination of 1s and 0s, not getting it right, whatever. Those are called errors. So noise can introduce errors into the analog signal.

How do modems deal with noise?

Well, one way they deal with it is they detect errors. And one way to detect errors is to send multiple bits of information, instead of just one bit. So --

:49:30 **THE COURT: Excuse me just a second.**

:49:32 **(Pause.)**

:49:57 **(Recess taken.)**

:51:22 **THE COURT: I am sorry about that. Please be**

:51:24 **seated. Go right ahead, Mr. Seitz.**

:51:31 **MR. SEITZ: Thank you, Your Honor.**

:51:34 **Your Honor, we were talking a little bit about**

:51:37 **how noise causes problems when you are sending an analog**

:51:41 **signal between modems.**

:51:42 **To step back a little bit, a modem is sending a**

:51:47 **carrier signal that has been modulated, which means it has**

:51:51 **been changed to represent the 0s and 1s, it's being sent.**

:51:55 **And again, the problem is, what happens if there is a**

:51:58 **lightning strike that occurs that causes some confusion on**

:52:03 **the receiving modem side as to whether it was receiving a 0**

:52:07 **and 1 because someone was running the blender or there was a**

:52:10 **lightning storm or whatever?**

:52:12 **One way you can deal with errors is you can add**

:52:15 **extra information to what's being sent. For instance, here,**

:52:19 **if we wanted to represent a 1, we could send four 1s in the**

:52:24 **hope that by sending more information, you would be able...**

:52:36 **THE COURT: I am told we are going to need to**

:52:38 **take a break.**

:52:39 **(Recess taken.)**

:55:29 **THE COURT: Unfortunately, we are going to have**

:55:31 **to endure these interruptions, and we will work through**
:55:36 **them. I do have the lawyers en route to address an issue**
:55:39 **that has arisen with the jury. When they get here, we will**
:55:42 **break again.**
:55:43 **But let's continue. We were talking about**
:55:47 **noise.**
:55:50 **MR. SEITZ: Your Honor, we were back at noise.**
:56:25 **Talking about how noise can interfere with an analog signal**
:56:29 **that is being sent between modems because someone turned the**
:56:32 **blender on when you were trying to download the web page on**
:56:35 **your PC and the transmission got messed up that was being**
:56:38 **sent over the air, for instance, an analog signal, because**
:56:42 **someone turned the blender on in the house, if you had a**
:56:44 **wireless network or something.**
:56:46 **So what are the ways that a receiving modem can**
:56:50 **deal and the sending modem can deal with errors that are**
:56:54 **introduced by that kind of interference?**
:56:56 **Well, one way is to add extra information to**
:57:01 **what is being sent to increase the odds that what is being**
:57:05 **received can be interpreted correctly. So you can, as we**
:57:09 **have shown here, it is just one very simple example, you**
:57:13 **could have four 1s being sent to represent a single 1. If**
:57:19 **there is an error caused by lightning and some of a bit is**
:57:25 **corrupted, you still have three 1s and a 0 sent. And the**
:57:29 **receiving modem can detect that there has been an error**

:57:31 **because it was expecting to receive four 1s.**

:57:35 **So what can it do as a result of receiving that**
:57:38 **three 1s and a 0 instead of four 1s? One thing it can do is**
:57:43 **just ignore the error and send it up and hope to get it**
:57:47 **interpreted right. Another thing it can do, which we have**
:57:51 **shown here, is sending it back to the sending modem -- and I**
:57:54 **will just play that again -- to say, hey, we get an error on**
:57:57 **this end, re-send the message again, and hopefully the**
:57:59 **lightning doesn't strike or the daiquiris are finished with**
:58:03 **the blender or whatever, and it comes back as a 1. That is**
:58:06 **one way.**

:58:09 **Another way is to basically have the receiving**
:58:13 **modem deal in probabilities, do some kind of calculation**
:58:19 **that figures out, well, let's see, it was four 1s that were**
:58:24 **sent, I have got three 1s and a 0. It's probably likely**
:58:27 **that that 0 was supposed to be a 1, and therefore I am going**
:58:32 **to send the 1 up to the computer.**

:58:36 **So there is a number of ways to correct errors:**
:58:38 **ignore the error, send the information again, or correct it**
:58:44 **by using probabilities, what was most likely to have been**
:58:48 **sent.**

:58:49 **So that's the way we can deal with the receiving**
:58:53 **modem and sending modem to try and compensate for errors on**
:58:57 **that.**

:58:59 **Just to summarize where we are right now.**

:59:02 **Modems take the digital information and translate it to**
:59:07 **analog signals and back to digital. Analog signals are**
:59:10 **modulated, and that is, by the way, how modem comes in, it's**
:59:13 **modulation-demodulation, modem, to 0s and 1s. We can change**
:59:20 **the frequency of that carrier wave, the amplitude, and**
:59:24 **phase, to represent the 0s and 1s. And we know noise is a**
:59:28 **problem with the analog signal being sent. But there are**
:59:30 **ways of dealing with noise in detecting and correcting the**
:59:35 **errors.**
:59:36 **Let's do a very brief overview on how this all**
:59:39 **fits into the eight patents that we are about to see.**
:59:41 **Here are the eight patents. This is how we**
:59:44 **categorized them and we have given them banners just so the**
:59:48 **Court will be able to keep track of them. Let's take a look**
:59:52 **at the '631 and '761 patents first.**
:59:58 **So we have got two modems and they need to**
:00:00 **communicate with each other. But if it was a world without**
:00:04 **protocols or rules, Motorola would make one modem, someone**
:00:10 **else would make another modem, and there would be no**
:00:13 **agreement on what language they would speak to communicate.**
:00:16 **So, realizing this, what evolved was a series of**
:00:24 **protocols or rules on how modems talk to each other. What I**
:00:27 **have shown here are two protocols that are followed by the**
:00:32 **modems when they want to communicate with each other. The**
:00:34 **one on the left is called the OSI or the open systems**

:00:38 **Internet, and on the right is the transmission control**
:00:42 **protocol/Internet protocol. Those are fancy words for**
:00:45 **protocols that modems follow to communicate with each other.**
:00:48 **Now, you can see that the protocols are arranged**
:00:51 **in layers. And each of the layers has a specific assignment**
:00:59 **that is used for the modems that travels from the bottom of**
:01:03 **the layer up to the top of the layer, until you actually get**
:01:06 **to the user data.**
:01:08 **So here, in this case, we are really just**
:01:11 **concerned with the bottom two layers of these protocol**
:01:14 **stacks, the physical layer and the data link layer.**
:01:19 **Again, if you just step back, this is about how**
:01:22 **modems communicate. If one speaks French and English,**
:01:27 **another speaks German and English, they realize, okay, we**
:01:30 **both speak English, so we can communicate. It's like that.**
:01:34 **It's organized into layers, depending upon what is happening**
:01:37 **between the two modems. And we are going to explain a**
:01:40 **little bit about what these layers are about now.**
:01:43 **We are talking here about the physical layer,**
:01:45 **which is the bottom layer, and the data link layer. The**
:01:50 **physical layer, that bottom layer, both those protocols we**
:01:57 **just saw -- and Your Honor will have all these slides to**
:02:01 **take home, so hopefully it will be clear the second or third**
:02:04 **time around. But the physical layer is where the modems**
:02:06 **agree on the electrical and mechanical connection.**

:02:11 **Basically, as I said before, Your Honor, what language are**
:02:13 **we going to speak so that we can communicate?**
:02:17 **And that in the prior art was a negotiation. So**
:02:20 **the one modem says, okay, I speak German, French and**
:02:23 **English. Another modem says, I speak, you know, Latin,**
:02:29 **Ukrainian, and whatever, and English. Then they negotiate**
:02:31 **and they say, okay, we both speak English, so let's connect**
:02:37 **and speak English.**
:02:38 **That's basically that bottom layer, it's the**
:02:40 **electrical-mechanical connection. The modulation is agreed**
:02:45 **upon, in other words, what the carrier signal is going to**
:02:48 **look like, what the characteristics are that they are going**
:02:51 **to use to communicate.**
:02:53 **Once the physical layer is negotiated in the**
:02:56 **prior art, it agrees on the next layer, which is the data**
:03:00 **link layer. The data link layer is typically a layer where**
:03:05 **error-detecting functions are performed. So again we are at**
:03:09 **the bottom of these two protocol stacks, where we have one**
:03:12 **layer, the physical layer, where the modems negotiate what**
:03:15 **language they are going to speak, what the modulation is**
:03:17 **going to be, how fast they are going to talk, things like**
:03:21 **that. Then there is a negotiation over the data link layer,**
:03:24 **what kind of error correction protocols are we going to**
:03:27 **follow. You know, you do this protocol or I do this**
:03:31 **protocol, which ones can we agree on. That is a negotiation**

:03:35 **that occurs as well between the two modems.**

:03:38 **Okay. So after you agree on the physical layer**
:03:43 **and the data link layer, you can transmit the user data.**
:03:47 **And you go up the protocol to the other functions in the**
:03:51 **stacks.**

:03:52 **What is the problem that was identified by these**
:03:58 **inventors?**

:03:59 **Well, the problem is that it takes time to**
:04:02 **separately negotiate the physical layer and the data link**
:04:05 **layer. So first you have to negotiate the physical layer,**
:04:09 **what language are we going speak, what the modulation is**
:04:12 **going to be, how fast are we going to talk, things like**
:04:15 **that. Then you separately negotiate the error correction.**
:04:18 **I can do this type of error correction, can you do it? No,**
:04:22 **I can't do that. But I can do something else. Back and**
:04:24 **forth, back and forth, until we agree. There is a separate**
:04:27 **negotiation at the data link layer as well.**

:04:30 **It takes time to do that. Time is the enemy for**
:04:35 **a couple reasons. Number one, people don't like to be**
:04:38 **delayed to establish the connections. You don't want to**
:04:42 **have to wait for a connection to be established while things**
:04:44 **are being negotiated. That is number one.**

:04:47 **Also, if you look at it from a larger picture,**
:04:50 **someone like Comcast doesn't want to have to spend a lot of**
:04:54 **time having a lot of modems doing a negotiation, and it's**

much more efficient for them to have a quicker negotiation because you need less infrastructure.

What did these inventors come up with as the solution for this?

Well, they figured out how to streamline the physical layer negotiation and the data link layer by basically establishing the data link layer based upon the physical layer negotiation.

So here we go. That just shows you pictorially, let me run it through again, instead of having separate negotiations, the data link layer is established based upon a parameter in the physical layer. So you don't have to have a separate negotiation of the data link layer. It saves time, and the connection is not vulnerable to failure because of noise and things like that before error detection can happen.

What are the benefits of this? The benefits of this are streamlining the connection so you don't take as much time, and then the connection is not subject to being dropped or corrupted or whatever while separate negotiations are occurring.

The link layer is established based upon a parameter in the physical layer at the same time that the physical layer is being established.

That's these two patents.

:06:22 **THE COURT: Okay.**

:06:24 **MR. SEITZ: Next patent. Multiple access packet channels.**

:06:28 **We have a common pipe, wire, signal, it can be cable, whatever, that are being shared by a number of modems, not just one modem.**

:06:46 **People had to figure out how multiple modems could share a single pipe, we will call it, because a pipe, it could be the telephone wire, it could be cable modems, it could be cable wire, it could be any number of things. There is a common pipe that has to be shared.**

:07:03 **Well, one way of having multiple modems share a common pipe is by using time division multiplexing. So as I have shown here, the pipe is divided up into time slots. So modem, the orange modem on the right has its time slots for its data, the orange data. The modem in the middle has the time slots for its blue data. And the one on the left has its time slots for purple data. Time division multiplexing. Sharing a common pipe based upon time allocation for each of the modems.**

:07:43 **That is time division multiplexing.**

:07:46 **So what is the problem? Well, what happens if one of the modems has a whole bunch of stuff it needs to send over the pipe it wants, and another modem has very little or nothing to send? Well, as you can see, it is not**

:08:02 **a very efficient way for the pipe to be utilized because**
:08:05 **there is dead space in the pipe.**
:08:08 **So what was the solution?**
:08:11 **Well, the solution of the '858 patent is to**
:08:14 **figure out how the pipe could be shared more efficiently**
:08:18 **when, for instance, one modem has more information to send**
:08:22 **than the rest. The '858 patent -- and we will get into**
:08:26 **detail on this later -- figured out how to use the pipe most**
:08:31 **efficiently by allowing a congested modem to share the dead**
:08:36 **space not used by other modems.**
:08:41 **The '819 patent reduced guard time. We are**
:08:44 **going to be dealing with the same pipe here we have just**
:08:49 **been looking at. What is guard time? If you think about,**
:08:53 **if you go up the Blue Route, for instance, some of those**
:08:57 **annoying entrances to the Blue Route have a traffic light,**
:09:00 **and the traffic light, you know, goes red and green to allow**
:09:04 **the cars at rush hour to come in at certain intervals.**
:09:07 **Well, if you didn't have that kind of regulation of the**
:09:09 **traffic on the Blue Route -- of course, it's always**
:09:12 **bumper-to-bumper there anyway, so it is not a perfect**
:09:15 **example -- but if you didn't build in that guard time by**
:09:19 **those red and green lights on the entrances to the Blue**
:09:23 **Route, the cars would be jammed up and running into each**
:09:25 **other and it would be even more chaos than it already is on**
:09:30 **the Blue Route.**

:09:31 **So like the modem sending information, like the**
:09:33 **cars entering the freeway, you build in guard time. You**
:09:37 **build in spaces so that the data being sent by each of the**
:09:41 **devices is not running into each other.**
:09:43 **Well, guard time, the problem with guard time is**
:09:46 **that it is not as efficient a use of time. If you want to**
:09:51 **have a lot of guard time built in, you can't send as much as**
:09:54 **quickly. So that is the problem.**
:09:57 **What was the solution? Well, in the '819 patent**
:09:59 **the inventors figured out how to, by what is called ranging,**
:10:06 **figure out how to synchronize essentially the clocks of each**
:10:12 **of these modems more efficiently so that they would send**
:10:15 **their information more efficiently, which could reduce the**
:10:19 **guard time, which allows you to send more data over the**
:10:22 **network.**
:10:26 **So, for instance, if these clocks were all off,**
:10:29 **the data might be running into each other. Otherwise, the**
:10:31 **alternative is to build in more guard time. But if the**
:10:34 **clocks are running right and each modem knows when it is**
:10:38 **sending something and knows when its slot will be and knows**
:10:42 **that with precision, you can reduce the guard time between**
:10:45 **messages being sent or the data being sent, and therefore**
:10:48 **put more information through the pipe.**
:10:51 **That is the '819 patent.**
:10:53 **The '159 and '234 patents.**

:10:59 **This is a little different than the pipe we were**
:11:01 **just looking at in time division multiplexing. This is**
:11:05 **going into a little bit of a different area here.**
:11:08 **So if you have a remote modem that's used to**
:11:14 **connect to cash registers in stores and things like that, it**
:11:18 **could be used for any number of things, modems have software**
:11:22 **in them and they need to be updated. So one way to update**
:11:26 **them is just to have a chip that has the program. It can't**
:11:30 **be overwritten or erased or anything, but you have to**
:11:33 **physically remove the chip and put a new one in with updated**
:11:37 **software. Obviously, if you are someone like Comcast and**
:11:42 **you have eight million customers, it doesn't really work too**
:11:45 **well to go out and replace the chips in eight million**
:11:48 **modems.**
:11:49 **Rather than pulling chips and putting new ones**
:11:52 **in, an alternative, of course, is to download software into**
:11:56 **these modems from a central location.**
:11:57 **Well, what is the problem with that?**
:11:59 **The problem is, if you are downloading new**
:12:03 **software from a central location, what happens in the middle**
:12:06 **of the download, which you see here, is if there is an**
:12:09 **interruption, well, the problem was, if there was an**
:12:12 **interruption, you have half-baked software in the modem,**
:12:16 **which basically renders the modem useless.**
:12:18 **So the only way you could protect against that**

:12:22 **was to have a chip in there which had some of the essential**
:12:26 **programs. But, of course, you couldn't update that chip, so**
:12:29 **you are back to the same problem. You have to physically**
:12:31 **remove the chip if you wanted to update that chip.**
:12:34 **So what did the inventors of the '159 and '234**
:12:38 **patents figure out? Well, they figured out how to remotely**
:12:42 **download the new software but still maintain the integrity**
:12:46 **of the old software in case you needed to go back and use**
:12:49 **it. Here we have represented a download that is occurring,**
:12:54 **and then the interruption, lightning or whatever stops the**
:12:59 **installation, but as you can see here in the yellow boxes,**
:13:02 **the old software still exists, and the modem can use that**
:13:06 **old software to try another download, that then would not be**
:13:11 **corrupted, or it could be used until the new download is**
:13:15 **successful.**
:13:16 **So, as you can see, the basic principle of this**
:13:21 **invention is protecting the old software so that it can be**
:13:26 **used in case the download is not successful with the new**
:13:32 **software.**
:13:33 **The '903 patent, justifying for noise. We**
:13:36 **talked about noise a little bit. So the transmitting modem**
:13:39 **is sending its analog signal and there is noise on the line.**
:13:43 **We know that noise can introduce errors. So that's the**
:13:48 **problem. We saw it in the other introductory slide. So**
:13:51 **what was the solution?**

Well, the two modems can cooperate to identify and adjust for the noise. So what happens, in very oversimplified terms, and Mr. Rozendaal is going to explain in excruciating detail, is that the receiving modem adjusts the signal sent out -- well, the signal is adjusted to compensate for the noise. That is basically what is going on, showing that the receiving modem gets a clearer message with fewer errors. So the transmitting modem and the receiving modem interact to identify the noise, and adjust for, compensate for it, so that the signal will be received by the receiving modem and is reliable.

Okay. Robust preamble. '444 patent.

When the two modems are not talking to each other, there nonetheless can be a carrier signal still going back and forth. It is just not modulated. That is called silence in modem lingo.

There can also be noise on the network. So what is the problem that is caused by noise on the network or just silence, as it is called in modem lingo?

Well, it is hard for a receiving modem to distinguish between the noise, its silence, and an actual message that is being sent that it is supposed to pick up and interpret or change back from an analog back to a digital signal.

As we showed here just pictorially, these

:15:25 **letters in here are meant to represent symbols, which, as we**
:15:31 **said before, symbols are a collection of multiple bits of**
:15:34 **data, symbols being sent. The question is, how do you tell**
:15:38 **whether it is a symbol and where the message starts and**
:15:41 **where the message ends?**
:15:43 **Well, the solution, which will be explained in**
:15:46 **more detail, is to attach a robust preamble which delineates**
:15:53 **when the message starts, so that the receiving modem says,**
:15:58 **instead of just getting silence or noise, the receiving**
:16:02 **modem says, aha, there is a robust preamble, what's going to**
:16:06 **follow right now is the data that I am supposed to receive.**
:16:10 **That, in a very oversimplified form, is what the**
:16:13 **'444 patent is about.**
:16:17 **That is a brief overview of the technology and**
:16:19 **the eight patents.**
:16:20 **THE COURT: Thank you, Mr. Seitz.**
:16:22 **This would be an opportune time, I see other**
:16:24 **counsel have arrived. Counsel, if you could surrender the**
:16:28 **tables just for a moment. Leave your things in place, and**
:16:33 **we will have other counsel come up.**
:16:36 **(Recess taken.)**
:45:52 **THE COURT: All right. Let's continue on,**
:45:56 **counsel. As a courtesy, I want to let you know that as soon**
:46:02 **as the other lawyers have had a chance to digest some**
:46:06 **authority, we are going to discuss it and probably have the**

:46:08 **jury brought in.**

:46:10 **Let's proceed.**

:46:10 **MR. DESMARAIS: Thank you, Your Honor. My introduction will be relatively short, so we can probably get through that.**

:46:24 **I want to start with just a little background on how we got here. I am not going to re-cover the technology points. We will do that with respect to each of the patents.**

:46:34 **To give you a sense of who the parties are in this case, Rembrandt is essentially a fund that raises money from private equity investors to bring lawsuits. They don't make products. They are not a practicing entity.**

:46:46 **The other parties, the cable parties, as you know, probably figured out by the scope of the courtroom, is the entire cable industry.**

:46:52 **It is relevant when you think about the backdrop of where these patents came from, because Rembrandt purchased the patents from a company called Paradyne. Paradyne was in the telephone business. In fact, they were affiliated for a while with AT&T. These patents come out of the telephone-related technology.**

:47:10 **Rembrandt, being a fund that purchased patents, bought the patents for a million dollars, with a right to share royalties in the future. Now they are claiming that**

:47:18 **those eight patents that came out of this telephone business**
:47:20 **that they bought for a million dollars cover the entire**
:47:22 **cable industry and are worth billions.**
:47:26 **That is sort of the backdrop.**
:47:28 **When you look at who Paradyne was, as I said,**
:47:30 **they were affiliated with AT&T for a while. If you look at**
:47:34 **the description from their product literature, they were a**
:47:36 **pioneering leader in high-speed network access solutions**
:47:38 **over copper wire and a recognized market leader in DSL.**
:47:44 **Those are telephone technologies, and that's where these**
:47:46 **patents come from, copper wire, DSL. That was their only**
:47:50 **business, as they said in their 10-K: "High-speed**
:47:54 **conductivity over the existing telephone network**
:47:58 **infrastructure."**
:47:58 **The reason that is important, when you look at**
:48:00 **the patents and the words in the claim, if properly read,**
:48:02 **these patents are related to making these inventions work in**
:48:06 **the telephone network infrastructure.**
:48:10 **The products that we make are called**
:48:12 **DOCSIS-compliant products. That essentially stands for data**
:48:16 **over cable. If you look at all the companies that are**
:48:18 **involved, these are cable companies and chip companies.**
:48:22 **They are not telephone-related companies. And Paradyne,**
:48:26 **where these patents came from, had nothing to do with the**
:48:28 **DOCSIS standards or the development of the technology that**

:48:32 **our products relate to.**

:48:34 **Mr. Seitz went over the different patents, and**
:48:36 **we agreed to the grouping, how we are going present them. I**
:48:40 **won't go through that now. I am going to save the sort of**
:48:42 **details of the individual patents for the Markman. But I do**
:48:46 **want to hit some highlights of what are the real disputes**
:48:48 **here and where did the disputes come from.**

:48:52 **One of the things that you will see repeatedly**
:48:52 **throughout this Markman, and it was emphasized in the**
:48:56 **briefs, Rembrandt is trying to move the patents away from**
:49:00 **their telephone origins, away from where they came from. So**
:49:04 **there is sort of repeated phrasing in the briefs, their**
:49:08 **mantra in the briefs was plain meaning, plain meaning, plain**
:49:12 **meaning. What they really mean by that is no meaning. They**
:49:14 **want to take the limitations for the individual claims and**
:49:16 **read them broadly so they can take telephone-related patents**
:49:20 **and cover the cable industry.**

:49:20 **When they say plain meaning, you have to really**
:49:24 **look at what they are proposing as a construction. And it's**
:49:26 **really amorphous words with no meaning, as opposed to what**
:49:30 **were the patents really getting at. Their goal at the**
:49:32 **Markman hearing is to sort of morph the patents to a broader**
:49:36 **coverage so they can extend on the telephones and get into**
:49:40 **the cable.**

:49:40 **Let me show you one example of that which I**

:49:42 **think will sort of crystallize what are the disputes that we**
:49:44 **have.**
:49:46 **If we look at the '858 patent, just briefly, and**
:49:48 **Mr. Seitz explained it a little bit, it was the patent on**
:49:54 **this product, this was the Paradyne network access unit. So**
:50:08 **it's a box that Paradyne designed and developed called the**
:50:14 **Paradyne network access unit. What it allowed you to do was**
:50:18 **deal with packet data and synchronous data from telephones.**
:50:22 **So if you think about what Paradyne's business was, they**
:50:26 **were trying to get people to deal with the telephone**
:50:28 **network, and that's the synchronous data, so they developed**
:50:32 **this box that can handle that synchronous data, the**
:50:36 **telephone calls. But they also wanted it to be able to**
:50:38 **handle data that came in packet form or packetized data.**
:50:42 **So they come up with the network access unit,**
:50:44 **and file the patent on it. And that patent is the '858**
:50:48 **patent, and it's in this case.**
:50:50 **If we look at Figure 3 from that patent, zooming**
:50:52 **in here, Figure 3 is the NAU or network access unit, which**
:51:00 **is that Paradyne product that we just looked at, the network**
:51:02 **access unit. It is one device that has modules in it for**
:51:10 **packet data, packet application modules and synchronous**
:51:14 **application modules. These are for the telephone calls. It**
:51:16 **is one box that has the ability to handle packet data and**
:51:20 **circuit switched calls or telephone calls. That one box**

:51:22 **then interfaces with the telephone network. That was the**
:51:26 **invention that they came up with in that patent.**
:51:30 **What is the issue here in the case? The issue**
:51:36 **in the case is when Rembrandt interprets the words in this**
:51:40 **claim, they are trying to interpret that device not to be a**
:51:46 **device. So when they interpret the word device in their**
:51:48 **claims, they try to expand that to be a system. Why do they**
:51:52 **do that? Because that one box, in their infringement brief,**
:51:56 **this box is the cable industry. Each one of these modules**
:52:02 **is a house that has a cable modem in it. And this TDM bus**
:52:06 **that was a wire in their box, they are saying that is the**
:52:10 **cable that goes for miles from house to house. And they are**
:52:14 **saying, these are houses, this is the miles long of cable**
:52:18 **wire, and it interfaces to this NAM, that's the cable**
:52:22 **headquarters, the head end, at the cable company. They are**
:52:28 **saying these are houses, this is the cable company, and here**
:52:30 **is the miles of cable in between.**
:52:32 **So they are looking at the terms in these**
:52:34 **claims, they see a term like TDM bus, and they are trying to**
:52:38 **say, well, that is a cable wire that goes for miles, when**
:52:40 **really, if you look at the patent, it was a wire internal to**
:52:44 **their network access unit box.**
:52:46 **When they see a claim term called device, they**
:52:48 **say, no, it is a system, because what they really want to do**
:52:50 **is get out of that claim, which was a box that allowed this**

:52:54 **interfacing with the telephone system, they want to get out**
:52:56 **of that and say we are going to cover all these houses and**
:52:58 **the cable wires connected.**
:53:02 **When you look at sort of the theme that is going**
:53:06 **through what we are going to hear in the next couple days,**
:53:10 **and what was in the briefs, is they are saying, plain**
:53:14 **meaning, plain meaning, plain meaning, what they are really**
:53:14 **doing with that "plain meaning" mantra is removing the**
:53:18 **limitations from these claims and removing what this**
:53:20 **invention really was.**
:53:22 **That is not what we are supposed to be doing at**
:53:24 **Markman. What we are supposed to be doing at Markman is**
:53:26 **staying true to what the invention was and interpreting the**
:53:30 **claims to capture the essence of what the invention was, not**
:53:34 **to expand the claims. True, we are not supposed to limit**
:53:36 **them down to specific embodiments. But we are also not**
:53:40 **supposed to be interpreting them so that we are expanding or**
:53:44 **blowing up the coverage of these claims and making them**
:53:48 **worth something that they are not, making them as if**
:53:50 **Paradyne invented the entire cable industry.**
:53:56 **If these patents, in fact, covered the entire**
:53:58 **cable industry, Rembrandt wouldn't have been able to buy**
:54:02 **them for a million dollars.**
:54:04 **That's where the backdrop of who these parties**
:54:06 **are becomes important.**

:54:10 **Rembrandt's job at this hearing is to try to**
:54:12 **expand these patents to get them out of the telephone**
:54:14 **heritage, where they come from, and try to expand them into**
:54:18 **the coverage of the cable.**
:54:22 **What else is going on at this hearing that we**
:54:24 **are going to see? And Mr. Seitz brought it up in his**
:54:28 **comments, so I want to comment on that as well. He says,**
:54:30 **you know, we brought forward a lot of terms to be**
:54:34 **interpreted. And why is that?**
:54:38 **The reason why we did that is because Rembrandt**
:54:42 **has asserted 80 claims in this case.**
:54:46 **Can we go to the next slide in the introduction,**
:54:48 **please.**
:54:48 **They have asserted 80 claims. If you look at**
:54:50 **the patents there, and you count up the asserted independent**
:54:54 **claims and the asserted dependent claims, it's 80. A**
:54:58 **hundred terms to interpret when you are talking about 80**
:55:00 **claims is actually quite reasonable. And what we did in the**
:55:04 **briefing is try to group the terms so that individual**
:55:06 **dispute resolutions will drive the definitions of a lot of**
:55:10 **the terms. But, you know, I have been in a lot of big**
:55:12 **patent cases and I have been in a lot of multi-patent patent**
:55:16 **cases, I have a 15-patent one going on now in San Diego, we**
:55:20 **have one or two claims for each patent. If the patents are**
:55:24 **infringed, you don't need 80 claims. One claim in one**

patent is an infringement. That solves the issue.

So why is Rembrandt pursuing 80 claims? It goes to the same issue that I was talking about earlier. They are asserting 80 claims because they are hoping that through the briefing, issues will get dropped, over these two days, we are going to miss important issues, and some of those claims will come out of this process with an expanded, broadened interpretation. Essentially, they are rolling the dice on 80 claims, hoping that either I am going to miss something or Your Honor is going to be overwhelmed with 80 claims and let some of them go through with a broader, expanded meaning and one of them will stay.

If these patents really covered the cable industry and were really infringed, we would be "Markmaning" one or two claims on each patent.

So where should the parties concentrate their meet-and-confer efforts after this hearing? It's on limiting the number of claims. Not on the terms. The terms will fall away if we limit the claims to the proper scope.

With that, I think it makes sense for us to just jump into the individual patents. I don't know that it makes sense to go about the individual issues on a patent-by-patent basis at this point. I think we should start with the first patent, and I think hopefully you will see, as we get into this, that the real dispute here is:

:56:44 **Are we going to interpret these patents to capture the true**
:56:48 **invention or are we going to expand them to the cable**
:56:50 **industry?**
:56:50 **THE COURT: You are prepared now to get into the**
:56:52 **heart, the meat of the matter.**
:56:56 **MR. DESMARAIS: Yes, sir.**
:56:56 **THE COURT: We will start out with plaintiff.**
:57:00 **MR. SEITZ: Ready?**
:57:00 **THE COURT: Yes.**
:57:02 **MR. SEITZ: I hope we are going to stick with**
:57:06 **the intrinsic evidence in going through the patents rather**
:57:08 **than the pictures from 10-Ks and 8Qs and things like that**
:57:12 **that we just had put up, and history and heritage, things**
:57:16 **like that. I am not sure heritage is extrinsic evidence.**
:57:20 **In any event...**
:57:24 **Not to insult Your Honor's intelligence, but**
:57:28 **just to recap a couple of the cardinal rules of claim**
:57:32 **interpretation.**
:57:34 **You don't read limitations from the written**
:57:36 **description into the claims.**
:57:38 **Mr. Desmarais is a terrific attorney. He just**
:57:40 **put that picture up there, which was an embodiment that he**
:57:44 **shows, and says is limiting --**
:57:46 **THE COURT: With respect to you, Mr. Seitz, it's**
:57:48 **really not necessary to take me through Phillips, unless you**

:57:54 1 **want to highlight something for me.**
:57:56 2 **MR. SEITZ: You are absolutely right. The only**
:57:58 3 **thing I wanted to highlight is what Mr. Desmarais just did.**
:58:00 4 **That was show you a picture, an embodiment from the**
:58:04 5 **specification --**
:58:06 6 **THE COURT: I was hoping you weren't going to**
:58:08 7 **take me through a Phillips primer.**
:58:12 8 **MR. SEITZ: Not at all.**
:58:12 9 **He showed you a picture from the embodiment and**
:58:14 10 **he said, basically, this should be limiting. Well, we know**
:58:18 11 **that Phillips says you are not supposed to do that.**
:58:22 12 **This is the principles of claim differentiation,**
:58:24 13 **which I will not go through. Not adding extra functions and**
:58:30 14 **unnecessary structure to means plus function. And when an**
:58:36 15 **applicant wants to disavow claim scope, it has to be clear**
:58:42 16 **and unmistakable.**
:58:42 17 **Here is a very clear and important point, which**
:58:46 18 **you hear is a theme of the defendants, which is, this just**
:58:50 19 **dealt with the telephone industry, therefore, it can't apply**
:58:54 20 **to anything else that came afterwards.**
:58:54 21 **Well, that is just not the law.**
:58:58 22 **Let's turn to the patents and get right at it.**
:59:02 23 **The '631 and the '761 patents, Your Honor. We**
:59:04 24 **have a number of slides here, and time is not going to**
:59:08 25 **permit us to get through them all, but I am going to try to**

:59:10 **do a condensed presentation here for the Court.**

:59:12 **We previously identified for the Court what the**
:59:14 **problem was that these patents were after to solve. The**
:59:18 **problem was, separate negotiations had to occur at the**
:59:24 **physical layer and data link layer, which took time, exposed**
:59:28 **the connection to being corrupted or being dropped. So the**
:59:34 **invention or the solution of these two patents, as we say in**
:59:38 **the callout, from the intrinsic evidence, is establishing**
:59:42 **the link layer connection, which is where the error control**
:59:46 **occurs, based upon the negotiated physical layer modulation.**

:59:50 **Just to step back a little bit, the physical**
:59:52 **layer is where the modems say what language are we going to**
:59:54 **speak? What's the modulation going to be that we are going**
:59:58 **to send back and forth to agree on what language we are**
:00:00 **going to speak? The data link layer deals with: What error**
:00:04 **correction are we going to use?**

:00:06 **So instead of having a separate negotiation of**
:00:08 **first a physical layer and the data link layer, the**
:00:10 **inventors came up with establishing the data link layer**
:00:14 **based upon the modulation in the physical layer. And it**
:00:18 **allows them to be established at the same time rather than**
:00:20 **have separate negotiations. It saves time. The connection**
:00:26 **is not subject to being corrupted.**

:00:30 **So there is a terminal disclaimer for the '761**
:00:32 **patent that shows you how the patents, they are related.**

:00:36 **For this patent, Your Honor, we had proposed**
:00:38 **that the Court construe three terms. And Mr. Desmarais is**
:00:44 **exactly right. We do have a preference for plain meaning.**
:00:46 **I think you will see why that is apparent as we get into**
:00:50 **this a little bit.**
:00:50 **Just as a yardstick of reasonableness, when the**
:00:54 **defendants in Texas were construing this patent, those**
:00:58 **defendants proposed that eight terms be construed, the Court**
:01:02 **construed eight terms. Now we have 12, now that we are in**
:01:06 **Delaware, by these defendants.**
:01:08 **So here is a summary of some of the errors that**
:01:12 **the defendants make in their claim constructions. We are**
:01:16 **going to go into a little more detail. As you can see, it's**
:01:18 **all the things that we just went over about imposing**
:01:22 **limitations on embodiments.**
:01:24 **Here is an important one which we are going**
:01:26 **spend some time on: limiting the patent to use with**
:01:30 **telephones and specific telephone standards. We are going**
:01:32 **to get right at that because, obviously, that is a big issue**
:01:36 **here.**
:01:38 **Let's get right at it.**
:01:40 **First, as far as what appears in the**
:01:44 **specification as being non-limiting and preferred**
:01:48 **embodiments, the patent and the intrinsic evidence is even**
:01:52 **clear on these points, as you can see, the detailed**

:01:54 **description is not to be taken in a limiting sense. It is**
:01:58 **illustrative. And is not intended to be exhaustive or to**
:02:02 **limit the invention to the precise forms disclosed.**
:02:06 **So the specification is consistent with the law,**
:02:10 **it confirms the law, that you don't read the specification**
:02:12 **to necessarily limit the claims.**
:02:16 **Okay. Why should these claims not be limited to**
:02:20 **telephony? We don't need to look at 8Qs and 10-Ks and**
:02:26 **things like that outside the patent? All we need is to look**
:02:28 **at the intrinsic evidence to see that this patent was not**
:02:32 **intended to be limited to telephony.**
:02:36 **The first example, there is a reference to the**
:02:38 **transmission control protocol/Internet protocol, TCP/IP.**
:02:44 **That is an Internet protocol. It is not a telephony**
:02:48 **standard that this patent is being used. If you remember,**
:02:50 **there is that five-layer stack, that TCP/IP stack, it deals**
:02:56 **with an Internet protocol. It is not a telephony protocol.**
:03:00 **I think this callout from the specification,**
:03:04 **Column 4, Lines 20 through 26, really captures it very well.**
:03:08 **That is, explaining what this invention was all about:**
:03:12 **letting multiple modems intercommunicate through a variety**
:03:16 **of mediums, including cellular and PSTN. PSTN is a phone**
:03:22 **network. Cellular, obviously, is phone. But you can see,**
:03:26 **there is no limitation there to telephony. It was to cover**
:03:30 **a variety of mediums, which include telephone and cellular.**

:03:36 **Again, if you want to get even closer to what these inventors were trying to accomplish, it was to design a system that provided reliability in data communication over a data communication link. It doesn't say over the telephone lines. It says over a data communication link.**

:03:56 **So we have an Internet protocol, we have the inventors in the specification saying that this was aimed at a variety of means, including phone, and it's over a data communication link and not necessarily telephony.**

:04:12 **So let's turn to Claim 1 of this patent.**

:04:16 **Calling modem and answering modem, the defendants have asked the Court to construe calling modem and answering modem. Rembrandt suggests that a jury is fully capable of determining which is a calling modem and which is an answering modem. The plain meaning should be applied to these terms in Claim 1.**

:04:42 **What do defendants suggest? Well, here, Your Honor, you are going to see a theme in the defendants' constructions. That is, to take terms which could be understood by the jury and add limitations to those terms by way of a definition.**

:05:00 **Here you have got defendants suggesting a construction where the modem is operable with KTU V. standards -- that is a telephone standards -- that places a call to an answering modem over a telephone network.**

:05:16 **Again, their attempt is to limit this claim to**
:05:20 **telephone standards and telephone networks, the same with**
:05:24 **the receiving modem. Let's see why that is wrong.**
:05:28 **Your Honor, we have already shown you, here is**
:05:30 **Slide 21, capturing it again, why this invention, based upon**
:05:34 **the intrinsic evidence, is not limited to telephony. You**
:05:36 **can see, it's all about communication over a data link,**
:05:42 **which can include cellular and telephone but was aimed at a**
:05:46 **variety of mediums. They want to limit the claim to a**
:05:52 **particular telephone standard. Well, the intrinsic evidence**
:05:58 **is directly contrary to limiting it to a particular**
:06:02 **telephone standard.**
:06:04 **We know it's, in the first place, not right to**
:06:06 **limit it to a telephone standard. But here we have got an**
:06:10 **example of a different protocol or standard that's referred**
:06:14 **to in the specification, Enhanced Throughput Cellular 2**
:06:20 **Quick Connect. That is a protocol that is being referred to**
:06:22 **in the specification.**
:06:26 **So defendants can't even get it right out of the**
:06:30 **box to limit it to ITU V. itself when, in fact, you can see**
:06:30 **in the specification a protocol which doesn't even fall**
:06:38 **within this as an example that was used in the protocol.**
:06:40 **So their limitation doesn't make sense to limit**
:06:42 **it to telephony and it doesn't make sense to limit it to a**
:06:46 **particular standard.**

:06:50 **Let's look at the next terms for Claim 1.**

:06:52 **Again, this is a problem with what defendants have proposed.**

:06:58 **That is not really construing terms but they want to**

:07:02 **construe phrases. So this next phrase is "A method for**

:07:04 **establishing a link layer connection between a calling modem**

:07:10 **having a plurality of possible first physical layer**

:07:12 **modulations and a plurality of possible link layer**

:07:16 **connections and an answering modem."**

:07:20 **Okay. So we are talking about those two wafers,**

:07:24 **the two bottom wafers of the protocol stack that we showed**

:07:28 **you before. So we are talking about establishing that link**

:07:32 **layer connection.**

:07:34 **So you can see here, the jury can understand**

:07:36 **these terms when they are taken in context. What's going on**

:07:42 **here again? Well, once again, Your Honor, there is a**

:07:46 **limitation being attempting to telephones again. You can**

:07:50 **say using telephone network link layer standards. Again,**

:07:56 **they are trying to impose specific standards where the claim**

:08:00 **doesn't refer to any standards.**

:08:02 **I am not going to keep repeating this, but I do**

:08:06 **want to keep mentioning that we have shown that the**

:08:08 **intrinsic evidence does not support, nor does the law**

:08:12 **support, limiting these terms to telephony or to any**

:08:16 **particular standard, as they try to do in their construction**

:08:20 **here.**

What is the new twist that's added to this other than just telephony? Well, they impose a data byte limitation. There has to be data bytes, there is a transfer of data bytes and the data bytes can only be transferred after the physical layer connection and link layer connection are established.

Well, if you look at the claim, Your Honor, and if you look at the specification of this patent, you will not see one mention of data bytes or when the data bytes need to be transferred. There is not a mention of it in either the specification or in the claim.

THE COURT: Was this used, this phrase "without transferring data bytes," was that used by the plaintiffs to overcome a rejection?

MR. SEITZ: That is exactly right. Your Honor is ahead of me. During the prosecution of the '631, the applicant distinguished a prior art reference, let's call it the McGlynn, the McGlynn reference. And where they get this argument is from the prosecution history, and McGlynn was distinguished on the transferring of data bytes point. But if you read McGlynn, you will see that McGlynn was distinguished because the data bytes were transferred after the physical and link layers were established to establish other features somewhere up in the other levels in the chain.

:09:52 **So McGlynn was distinguished because it used**
:09:54 **data bytes to negotiate something other than the physical**
:09:58 **and link layers.**
:10:00 **You will see, it refers here to negotiating**
:10:02 **features, and you will see down here in the highlighted**
:10:06 **portion of this that these data bytes were used after the**
:10:14 **previously established physical layer and link layer**
:10:16 **connections to perform the feature negotiation.**
:10:20 **So it has nothing to do with the data bytes at**
:10:24 **the link layer and the physical layer level. It is talking**
:10:26 **about features being negotiated after the physical layer and**
:10:30 **the link layer have been established.**
:10:38 **So, again, just to summarize this, they are**
:10:42 **misreading the prosecution history and then trying to impose**
:10:46 **a data byte limitation where one does not exist in the**
:10:48 **claims or the specification and is not supported by the**
:10:52 **prosecution history.**
:10:54 **The next term, physical layer connection,**
:10:56 **establishing the physical layer connection. So, Your Honor,**
:11:00 **if we remember back to the protocol stacks, we are dealing**
:11:04 **with the bottom two, which is first the physical layer and**
:11:06 **then there is the link layer, those are those two stacks**
:11:10 **that are being established. So, again, we believe the jury**
:11:14 **can understand what the physical layer connection is without**
:11:18 **having to have an interpretive effort to add limitations,**

like the defendants do.

What the defendants have done is, as you see from the underlining in their construction, they have added some sequencing and some steps that have to be done. So they add the limitation "upon completion of training and startup, before any link layer connection is established."

Well, a connection, in our view, should be given its plain meaning. As you can see here, there is no support in the specification for saying that one thing has to occur before the next thing occurs. As you can see here, the link layer connection is established substantially instantaneously upon the completion of the physical layer negotiation. That's what this invention is all about. It's not a one and then the other. It's that they can be established at the same time.

So their attempts to have ordering as a limitation in the claim should be rejected by the Court.

So here we have the defendants basically pulling out terms and then adding them back into a phrase where they are requesting that the Court then construe the phrase which already has claims construed.

Once again, in establishing the physical layer connection here, we have the data byte transfer limitation, different frequency tones, again, trying to limit it to telephony. And probably more importantly for this or

:13:00 **equally important with this slide is that they require that**
:13:02 **a negotiation occur each time a physical layer is**
:13:06 **established. So if you see at the tail-end, and then to**
:13:10 **establish the physical layer connection, you see that, what**
:13:14 **is implied here in their limitation is they are trying to**
:13:18 **say that there has to be a separate negotiation each time.**
:13:22 **Well, if you look at the claim language, there is nothing**
:13:24 **about sequencing in the claim language. You establish the**
:13:28 **physical layer connection between the two modems. There is**
:13:34 **no sequencing because they can be established at the same**
:13:40 **time.**

:13:40 **Again, now we are talking about the level where**
:13:44 **the physical layer connection is based upon a modulation**
:13:48 **that is agreed on between the two patents. We are still in**
:13:52 **Claim 1, lower down in the claim.**

:13:56 **So, in interpreting this phrase, again, we have**
:14:00 **a preference for plain meaning. The jury can certainly**
:14:04 **understand what the physical layer connection is, what the**
:14:08 **negotiated physical layer modulation is and how it is**
:14:10 **chosen.**

:14:12 **So what have defendants done? They basically**
:14:14 **take the same words, but then they try and add limitations.**
:14:18 **They require that modems default. They require that the**
:14:20 **physical layer modulation be chosen in the negotiation, when**
:14:26 **we know the modems could have already negotiated the**

:14:30 **modulation. They require that the value be preset before**
:14:34 **the modems even communicated. There is no such limitation**
:14:40 **in this claim or in the specification for adding these**
:14:42 **additional limitations. And the purpose is**
:14:46 **infringement-motivated, I think is the simple way to say it.**
:14:48 **There is no limitation as to defaulting. There is no**
:14:52 **limitation as to physical layer modulation having to be a**
:14:58 **step of the claim.**
:15:00 **Finally, "establishing the link layer connection**
:15:02 **based upon the negotiated physical layer modulation." That**
:15:06 **is what this patent is about, establishing the link layer**
:15:10 **connection using the physical layer modulation.**
:15:16 **The jury can understand that the link layer**
:15:18 **connection is established based upon the physical layer**
:15:22 **modulation. What have defendants done? They have removed**
:15:26 **it from a plain meaning that the jury can understand, and**
:15:28 **they have added all sorts of limitations here: "Before the**
:15:34 **modems can transfer data bytes," here is the data bytes**
:15:36 **again, here is the requirement again that there was a**
:15:38 **default, there has to be a negotiation where it's chosen as**
:15:44 **part of a claim step, there has to be preset continuation in**
:15:48 **the modems and it has to occur before the modem is even**
:15:52 **communicated. There is no support in this claim language**
:15:54 **for adding all of these limitations.**
:15:58 **We have addressed why data byte limitation is**

wrong. The link layer can be established substantially instantaneously with the physical layer. There is no after-limitation that should be imposed, and there is no limitation to timing of preset values. There is no support in the intrinsic evidence for any of that.

Let's turn to the logic claims of the '631 patent.

We are going to shift away from Claim 1 and shift to Claim 10. I apologize for jumping around here, but there just isn't time to cover everything. We are trying to cover some of the big areas of dispute.

The logic for establishing the physical layer connection, you will see, is put in dispute. The question here is whether it is a means-plus-function claim. The same issue is present, as you see here, for the logic for establishing the link layer connection.

So logic for establishing the physical layer connection, logic for establishing the link layer connection, is that a means-plus-function claim? Well, our simple answer to this, Your Honor, is no. But let's look, first of all, at what the defendants have proposed that the Court adopt, if it was a means-plus-function claim.

You can see here, they have got operating codes for implementing an algorithm to default, chosen in the negotiation, values that were preset before the modems

communicated. Lots of limitations have been added to the structure, not essential to the structure, if you were going to apply this as a means-plus-function claim. But, in fact, it is not, because the law is pretty clear that there is a presumption that unless the applicant has used the terms "means for" that this should not be construed as a means-plus-function claim. And logic here, as you can see from the prosecution history, is meant to refer to the software. It's not meant to be a means-plus-function claim.

All right. This is a really good chart, and we are proud of it because it took a lot of time to put together. But what this does is this summarizes the improper limitations that the defendants have tried to place into the claims to basically limit the claims so it doesn't cover their products.

We are not going to go through each. It's meant as just a handy reference for the Court to be able to go through.

Let's turn to the '761 patent, which is the related patent. Rembrandt asks for two terms to be construed for this patent, the defendants have asked for eight terms to be construed.

We are on the '761 patent. Again, we have the same issues that were present for the patent we just went through, Your Honor, for the '631. For the '761 patent,

:18:56 they are trying to limit it to the described embodiments.
:19:02 Telephone comes back.
:19:18 Hopefully, I am not droning on, Your Honor.
:19:22 Just cut me off.
:19:22 THE COURT: I will.
:19:24 MR. SEITZ: Let's take a look at this. I think
:19:26 we will finish this fairly quickly.
:19:30 So you see we have similar claim terms for both
:19:32 these patents. "Physical layer of a data connection" -- we
:19:36 talked about the physical layer before. And that's asked to
:19:42 be construed by the defendants. Again, what is the issue?
:19:44 Trying to limit the claim to a particular telephone
:19:50 standard. And now we have the added twist -- "in existence
:19:52 as of May 31, 1995."
:19:56 Well, there is no support for that in the
:19:58 specification, that there is a date limitation as to the
:20:04 physical layer of the data connection and how it should be
:20:08 limited to a particular telephony standard and in existence
:20:14 as of a certain date. Basically, it's just an attempt to
:20:20 try and impose a limitation that won't cover their products.
:20:24 And there is no support for that. We have cited the law
:20:26 that says later technology can still be covered by a patent
:20:30 that came before it.
:20:32 So another reason, which we haven't touched on
:20:34 before, why this is just plainly incorrect, to put a bunch

:20:38 **of standards in here as a limitation for the independent**
:20:42 **Claim 1, is that the dependent claims are actually**
:20:46 **differentiated from the independent claim based upon**
:20:50 **protocols.**
:20:52 **So, under principles of claim differentiation,**
:20:56 **independent Claim 1 should be differentiated and should not**
:21:00 **be limited to a particular standard when later dependent**
:21:04 **claims are.**
:21:08 **Error control negotiation sequences. Here is an**
:21:12 **attempt to impose a limitation in the claim that sequences**
:21:16 **actually be attempted, not only be attempted but attempted**
:21:20 **in turn, and when one fails the next option in the sequence**
:21:24 **is tried. If Your Honor sees where we have underlined the**
:21:26 **defendants' interpretation, all of these limitations are**
:21:30 **added that don't find support in the specification, or if**
:21:34 **there are protocols or sequences referenced in the**
:21:38 **specification, we know that they are non-limiting. They**
:21:42 **should not be used to limit the claim.**
:21:44 **So the error control protocols need not be**
:21:48 **tried, they need not be tried in turn.**
:21:52 **Just to show why their argument simply doesn't**
:21:54 **work in imposing this sequencing, Your Honor, Figure 2 of**
:21:58 **the patent lists as a sequence "LAPM or disconnect." Well,**
:22:04 **LAPM is an error control method, and disconnect, we all know**
:22:10 **what that means. That means that modems drop their**

:22:12 **connection. Well, if you take Figure 2 in this sequence, it**
:22:18 **doesn't make any sense with their claim language, because**
:22:20 **they say, when an attempt to use one such protocol fails,**
:22:24 **the next option in the sequence is tried.**
:22:28 **Well, here, Figure 2, it either works or it**
:22:30 **disconnects. There is no sequencing and trying. So Figure**
:22:36 **2 is directly contrary to the interpretation that they ask**
:22:40 **this Court to adopt.**
:22:42 **I am done. If you give me just 30 seconds, I am**
:22:46 **done.**
:22:46 **THE COURT: Okay.**
:22:48 **MR. SEITZ: So here is the summary chart, as I**
:22:52 **said, that we are very proud of. We have collected all of**
:22:54 **these limitations that the defendants have attempted to**
:22:58 **impose on the '761 patent where it's in the claim. And I**
:23:02 **think the Court will be able to use this as a handy**
:23:06 **reference.**
:23:06 **THE COURT: Thank you, Mr. Seitz.**
:23:06 **And thank you for being patient.**
:23:10 **Counsel, can we shift again, please.**
:23:14 **(Recess taken.)**
:43:36 **MR. DESMARAIS: Your Honor, if I may approach, I**
:43:38 **also have some slides.**
:43:46 **THE COURT: All right.**
:43:52 **MR. DESMARAIS: I will start with the '631. If**

:43:56 **you see the way we set up the binder, it is tabbed and**
:43:58 **labeled, so you should be able to follow along, and it is**
:44:02 **also on the screen.**
:44:02 **The '631 is entitled a System And Method For**
:44:06 **Establishing Link Layer Parameters Based On Physical Layer**
:44:08 **Modulation. Let me give a little bit of an overview before**
:44:12 **I jump into the terms.**
:44:14 **If you look right at Figure 1, it talks about**
:44:16 **calling modems and answering modems over the cellular**
:44:20 **network, or the PSTN, which is the public switch telephone**
:44:24 **network. And you can see No. 12 is the mobile switching**
:44:28 **center, which is a cellular switching center, and No. 34 is**
:44:32 **the PSTN, which stands for public switch telephone network,**
:44:36 **and that plays on what I was talking about earlier, where**
:44:40 **these patents come from.**
:44:42 **Both of these patents rely for priority on**
:44:44 **provisional applications. You can see that cited right on**
:44:46 **the face of the patent on the cover page. The title of two**
:44:50 **provisional applications is quite telling. One is a System**
:44:52 **And Method For Fast Startup For Dial Modems. Those are**
:44:56 **telephone modems. And the other one is Cellular Data**
:45:00 **Protocol For Quick Connection. They are talking about**
:45:04 **cellular.**
:45:06 **Those are the two provisional applications that**
:45:08 **led to the application we are talking about here.**

:45:10 **What is the patent getting to? If you look**
:45:12 **right in the summary of the invention, it talks about**
:45:14 **establishing a "link layer connection between a calling**
:45:18 **modem" and the calling modem has "a plurality of first**
:45:20 **physical layer modulations and a plurality of possible**
:45:24 **second link layer connections."**
:45:24 **So it's going to then talk to an answering modem**
:45:28 **that has those same things. And the calling modem and the**
:45:32 **answering modem then have to decide which of these plurality**
:45:34 **of physical layer modulations and which of these plurality**
:45:38 **of link layer connections are we going to deal with when we**
:45:42 **talk to each other.**
:45:42 **Then if we look in the background of the**
:45:46 **invention, it talks about the physical layer of this OSI**
:45:48 **model that Mr. Seitz talked about. And I won't go into the**
:45:52 **details of that. But that physical layer is the lowest**
:45:54 **layer. And it's concerned with establishing the electrical**
:45:56 **and mechanical connections between the two modems.**
:46:00 **And then there is this data link layer, which is**
:46:02 **the next level, which talks about checking the errors as**
:46:06 **well as re-transmitting frames that are not received**
:46:10 **correctly.**
:46:14 **Then if we look a little bit into the field of**
:46:18 **the invention, in the summary of the invention, we find out**
:46:20 **that the inventors tell us the present invention generally**

:46:24 **relates to data communication protocols and more**
:46:26 **particularly to presetting the link layer parameters based**
:46:30 **on the physical layer modulations.**
:46:34 **I think the next blowup here under the Summary**
:46:38 **of the Invention is important. And this is contained in the**
:46:40 **summary of the invention, and it was one of the driving**
:46:42 **points for the invention, which is, Another step includes**
:46:44 **establishing this link layer connection based on the**
:46:48 **negotiated physical layer connection. And that link layer**
:46:52 **connection includes parameters that are preset to default**
:46:56 **values based on the negotiated physical layer connection.**
:47:00 **They are telling us right in the summary of the**
:47:00 **invention that we have got the physical layer connection,**
:47:04 **and that the link layer connection is going to be based on**
:47:06 **parameters that are preset to default values which will get**
:47:10 **to the physical layer.**
:47:12 **So it is right in the summary.**
:47:14 **What are the terms that the parties are**
:47:16 **disputing? We have on Slide 8 a list. We have sort of**
:47:18 **grouped them to make it easier to deal with. Then you will**
:47:22 **see, there are numbers here on the left. Those numbers**
:47:26 **follow the tab numbers in the binder that I gave you. For**
:47:28 **any term you want to go to, you can just go to the tab**
:47:32 **number.**
:47:34 **We will take the first tab first, "calling**

:47:36 **modem" and "answering modem."**

:47:40 **You see that appears in Claim 1, a calling modem**
:47:42 **and answering modem. And then they are going to have a**
:47:46 **physical layer connection between the calling modem and the**
:47:48 **answering modem. Pretty straightforward.**

:47:50 **But then when we look at the constructions, you**
:47:54 **know, this first construction actually is a takeoff on the**
:48:00 **theme I mentioned in my preliminary comments. When you look**
:48:04 **at what it is Rembrandt's construction is trying to do, and**
:48:08 **I can show you on the overhead projector that I have**
:48:12 **underlined it, this is for calling modem and answering**
:48:16 **modem. If you look at Rembrandt's proposed construction,**
:48:18 **they broaden it out to a communication device -- we are no**
:48:22 **longer on modem now, now we are broader, we are on a**
:48:26 **communication device -- that begins the process of**
:48:28 **establishing or attempting to establish a connection with**
:48:30 **another communication device.**

:48:32 **If you look at what they have done in their**
:48:34 **construction, we are no longer limited to modems. Now we**
:48:38 **could be a telephone, we could be a fax machine, we could be**
:48:40 **a two-way radio. They have taken this patent that deals**
:48:44 **with calling modems and answering modems and they have**
:48:48 **broadened it out to cover any communication device.**

:48:50 **And that is the kind of thing you are going to**
:48:52 **see over and over again in these proposed constructions,**

:48:54 **where they take something that actually has a meaning,**
:48:58 **something that the patent described, and they try to make it**
:49:00 **as broad as possible.**
:49:02 **Now, they talk about our construction, and they**
:49:06 **said that ours was limiting because we said that it has to**
:49:10 **be a modem operable with the ITU V. standards. They said**
:49:14 **that that is limiting the modem to telephones. That's not**
:49:18 **what it says. It doesn't say modem limited to the ITU V.**
:49:22 **standards. It says a modem that is operable with the ITU V.**
:49:28 **standards. What that means is this invention is talking**
:49:30 **about a modem that can work with those systems. It can do**
:49:34 **other things, but it is operable with those systems. And**
:49:36 **that is important. That is what the whole invention was.**
:49:38 **The whole invention here was a modem that could**
:49:40 **work over the cellular system, a modem that could work over**
:49:44 **the telephone system. You can't read this patent on the**
:49:48 **modem that can't do that. Products accused of infringement**
:49:50 **might be able to do other things, but it has to at least be**
:49:54 **able to do that, which is what our construction is trying to**
:49:58 **get at.**
:49:58 **So our construction lives within the spirit of**
:50:00 **the patent and it lives with where the invention came out of**
:50:04 **and how it came out of the claim.**
:50:08 **THE COURT: Could you say operable with ITU V.**
:50:10 **standards and other...**

:50:14 **MR. DESMARAIS: Yes, you can do that, sure. You could do that. But as long as it's able to work with the ITU V. standards and go over the telephone network cellular, PSTN, we would be fine with that. It has to be able to do that. It can't be something that doesn't have the ability to do that.**

THE COURT: Mr. Seitz, would that be, in your view, unduly limiting?

MR. SEITZ: Well, if I understand, that it is not being limited to a telephone network. But I don't think that's what they are saying, what they have proposed here, because it is garnished with the telephone network there in the claim limitation.

THE COURT: What if it said through a variety of media or medium? Language to that effect?

MR. SEITZ: I think what is driving this is that the cable modem probably doesn't do ITU v., and that is why they are suggesting this construction.

THE COURT: Counsel has just indicated that he is fine with it. You view it as limiting. He doesn't. He is saying at least it has to do this. It seems to me there might be a basis for further discussion.

MR. SEITZ: There may.

MR. DESMARAIS: Where does our construction come from? Let's take a look at the evidence. First of all, we

:51:32 **are interpreting calling modem and answering modem. If you**
:51:34 **look in the dictionary, to place a call is a telephone call.**
:51:38 **We have cited two different dictionaries there, the**
:51:40 **Cambridge and Wikipedia, for someone like myself, I don't**
:51:46 **know the details of how that works, but I understand that**
:51:48 **that is a current dictionary. But a call, going back, a**
:51:52 **call is clearly, if we go back, a call is clearly what**
:52:00 **people talk about as a telephone call. When you read the**
:52:02 **patent that is what they are talking about. Every time they**
:52:04 **talk about calling modem, answering modem, they are talking**
:52:08 **about telephone calls.**
:52:08 **If you look at the next slide, you look at what**
:52:12 **the claim term actually gets -- the way the claim is used,**
:52:16 **it says a calling modem and an answering modem having a**
:52:18 **plurality of possible physical layer modulations. What does**
:52:22 **that mean? What is a modulation? So you go back again to**
:52:26 **the dictionary. And a modulation is talking about the**
:52:32 **telephone system.**
:52:32 **So if you look at the Newton telephone**
:52:34 **dictionary, which we cited, for modulation protocols, it**
:52:38 **says, A modem converts digital signals generated by the**
:52:42 **computer into analog signals which can be transmitted over**
:52:44 **an analog telephone line.**
:52:48 **So when you are looking at plain-meaning**
:52:50 **dictionaries, calling modem and answering modem are**

:52:52 **telephone modems. When you look at what they do in the**
:52:56 **claims, which is they communicate and they have a plurality**
:52:58 **of physical layer modulations, and then you look up what**
:53:02 **modulation means in its plain meaning, it's talking about**
:53:06 **signals over analog telephone lines.**
:53:10 **Now, if we look at how the calling modem and**
:53:16 **answering modems are described in the patent, they are**
:53:18 **described in the patent, in addition to in the context of**
:53:22 **telephones, they set themselves up with these layers by**
:53:28 **exchanging tones. That's how they are described. The**
:53:30 **modems in the patent have to exchange tones, and that's how**
:53:34 **they are made aware of the different modulations, that's how**
:53:38 **they do the negotiations. You can see that in the blowout**
:53:40 **at Columns 7, Line 22 to 30. It's in all the figures.**
:53:46 **If you look at Figure 4 in the patent and Figure**
:53:48 **5 in the patent, what you see here -- you don't see it so**
:53:52 **well there, so let me use the overhead. If you look at what**
:53:54 **is being described, now, Figure 4 here is for the calling**
:53:58 **modem for a cellular system. If we zoom in, it talks about**
:54:10 **dialing and sending a signal. It talks about the**
:54:12 **frequencies of the signals, 1680, 800. It talks about the**
:54:18 **V. standards, which are the telephone standards. It talks**
:54:20 **about the PSTN. It talks about 2100 hertz. This is for the**
:54:26 **calling modem.**
:54:26 **You see the same thing in the answering modem.**

:54:28 **It works by answering the call, it works by sending a**
:54:34 **2100-hertz signal. It works on the telephone standards. It**
:54:38 **works on the telephone standards.**
:54:38 **Then when you look down, those frequencies --**
:54:44 **their own expert witnesses -- are frequencies from the**
:54:46 **telephone network.**
:54:46 **THE COURT: Counsel, you know that I am not**
:54:48 **going to consider extrinsic evidence at this stage. You are**
:54:56 **citing to a deposition. I am not really interested in what**
:54:58 **their expert says at this stage. For better or worse, I am**
:55:00 **not interested.**
:55:02 **MR. DESMARAIS: Fair point, Your Honor. I**
:55:04 **wasn't using it to add anything to the patent.**
:55:06 **THE COURT: What does it add to the discussion?**
:55:08 **MR. DESMARAIS: It shows you that these**
:55:10 **frequencies are telephone frequencies.**
:55:12 **THE COURT: I will rely on your argument.**
:55:14 **MR. DESMARAIS: These frequencies are telephone**
:55:16 **frequencies. When you look at how the patent describes the**
:55:20 **calling modem, how it describes the answering modem, it**
:55:24 **talks about calling and answering, it talks about --**
:55:26 **THE COURT: Let me say something else, since we**
:55:28 **have so many patent lawyers in the room. There seems to be**
:55:30 **a misconception out there in the land that's been reported**
:55:34 **back to me that I won't absolutely consider extrinsic**

:55:36 **evidence. That is not true. But as a general proposition,**
:55:40 **I don't.**
:55:40 **MR. DESMARAIS: I think that's probably the best**
:55:44 **way to go. I don't intend to rely on it.**
:55:46 **THE COURT: This is a view held by one of my**
:55:48 **colleagues, I am told. I just wanted to clear that up.**
:55:54 **MR. DESMARAIS: I understand, Your Honor.**
:55:54 **When we look at how they are described in the**
:55:56 **figures and the spec, it is all about the telephone network.**
:55:58 **So the modems of the patent have to work with these**
:56:02 **telephone standards and they have to work in the telephone**
:56:04 **network. They can do other things, but they have to do at**
:56:08 **least that. When we look at how they are described in**
:56:10 **words, the entire patent is about this. It talks about**
:56:14 **cellular, dial connections, 1-800 numbers, busy signals.**
:56:18 **This is not the cable system. This is the telephone system.**
:56:20 **So you see the callouts in Column 2,**
:56:22 **particularly for cellular customers, it tells you about**
:56:24 **cellular customers. The callouts in Column 5, it talks**
:56:28 **about direct inward dial connections and instructing the**
:56:32 **phone company. You are talking about 1-800 numbers. You**
:56:36 **are talking about busy signals.**
:56:38 **So the modems have to do with these things. It**
:56:40 **is all through the intrinsic record.**
:56:42 **We already talked about in my preliminary**

:56:44 **comments the provisional applications that this patent is**
:56:46 **based on, for, specifically, system and method for fast**
:56:52 **startup dial modems and for cellular data protocols.**
:56:56 **Then if you look at what the patent talks about,**
:56:58 **it has all these V. standards all throughout the**
:57:02 **specification. And if you look in the joint appendix, you**
:57:04 **can see what the V. standards actually are is all about**
:57:10 **cellular modems and PSTNs or the public switch telephone**
:57:16 **network. These are in the joint appendix cites and they are**
:57:20 **in the slides. You should see it there: cellular, PSTN,**
:57:24 **phones, ringing system, PSTN. These are all attributes of**
:57:26 **the telephone network. You can see the slides there. I**
:57:30 **won't belabor the point. That is what the V. standards are,**
:57:32 **and that is what the entire specification talks about.**
:57:34 **More importantly, we see here in the**
:57:38 **specification, it says that these modems have to fall back**
:57:42 **to the modulation. So if you look at what it says, The**
:57:46 **calling and answering modems either operate with the**
:57:48 **disclosed ETC Fast Connect Protocol or must be able to fall**
:57:52 **back to conventional V. physical modulations.**
:57:56 **That is a callout from Column 6. And they list**
:57:58 **there all the different standards that are the V. standards,**
:58:02 **which are the telephone standards. And they are saying that**
:58:04 **this device has to be able to fall back to those standards.**
:58:06 **Down on Column 13 we see again, Then the modems**

:58:10 **essentially fall back and perform an alternative error**
:58:12 **correction sequence such as the recommended ITU Standard**
:58:16 **V.42 error correction sequence.**
:58:20 **That is where we get our construction, which is,**
:58:22 **they have to be able to do that. They can do other things,**
:58:24 **but they must be able to use these standards. They must be**
:58:28 **able to work in the telephone network or this whole**
:58:30 **invention doesn't actually work.**
:58:32 **Again, that is just the standard for -- one of**
:58:34 **the V. standards for communication are all over a telephone**
:58:38 **network. The real interesting thing about that is, if you**
:58:40 **look at the V. standards that are actually cited in the**
:58:44 **patent, they talk about what is a call modem and what is an**
:58:48 **answer modem -- that's on Slide 22 -- they are talking about**
:58:52 **call modem and answering modem in the context of the**
:58:54 **telephone network.**
:59:00 **When you look, then, at what is Rembrandt's**
:59:04 **proposal, I told you at the beginning they sort of want to**
:59:08 **drive this broader to any sort of data equipment, but they**
:59:10 **are the ones that are relying on extrinsic evidence. They**
:59:12 **don't cite any of the stuff in the specification. They**
:59:14 **don't talk about the figures. They don't talk about the V.**
:59:18 **standards that are cited in the specification. They don't**
:59:20 **talk about the words in the specification or the provisional**
:59:22 **applications. Instead, they rely on their expert**

declaration that they submitted with their brief. Frankly, it is irrelevant, because it contradicts what is in the specification, and it doesn't interpret the terms in the way that they are used in the patent.

Then they talk about, their expert talks about other patents that have cited these patents, and it's in their brief. All of those other patents -- and we have listed them here on Slides 25 and 26 -- all of those other patents, if you get them and look at them, are all about the V. standards, which are the telephone standards anyway. So the point they are trying to make is these patents were cited by other patents that came later. And it doesn't even make sense because, if you get those patents and look at them, they are all about the V. standards as well, which are the telephone standards.

So getting back, then, do they cite any extrinsic evidence? The one thing they cite in their brief, Figure 1, they point to the "IP, etc." cloud there and they say, that IP cloud could be anything. That could be the Internet. It could be cable. It could be anything. But if you notice the figure --

THE COURT: You meant intrinsic evidence.

MR. DESMARAIS: Yes. Your Honor. This is the only piece of intrinsic evidence that Rembrandt relies on. They point to that IP cloud on the right there. They say,

:00:36 **See, there is an IP cloud, so this isn't limited to the**
:00:40 **telephone network because the IP cloud could be some other**
:00:42 **kind of network as well.**
:00:42 **But you will notice in the figure, there is no**
:00:46 **second modem talking through the IP network. All of the**
:00:50 **calling and answering modems are going through the MSC,**
:00:54 **which is the cellular network, or the PSTN, which is the**
:00:58 **telephone network, the answering and the calling, and that's**
:01:00 **what the patent talks about. There is no answering and**
:01:02 **calling going through the IP network, because this patent**
:01:04 **wasn't about that. It was about the center.**
:01:08 **If you read the descriptions of Figure 1, it**
:01:10 **never says there are calling and answering modems that go**
:01:12 **through that IP network. So their only piece of intrinsic**
:01:16 **evidence doesn't even work for them.**
:01:18 **When you go back to what is our proposed**
:01:20 **construction -- Slide 11, please -- our proposed**
:01:24 **construction comes right out of the patent. It is a "modem**
:01:26 **operable with ITU V. standards," which is exactly what the**
:01:30 **specification says it has to be, "that places a call to an**
:01:32 **answering modem over a telephone network," which can be**
:01:36 **either cellular or PSTN. It has to be able to do that to do**
:01:40 **what's in this patent .**
:01:40 **Their construction has no limitations, and, in**
:01:44 **fact, broadens the claim, because they say, it is a**

communication device, not even limiting it to a modem. It could be a walkie-talkie, for all we know, that begins the process of establishing the call. That can't be the proper construction.

The next two terms are "physical layer modulations" and "physical layer connection." I will treat them together. They appear in Claim 1 just as physical layer modulations and physical layer connections, and they are also in Claims 6 and 10.

If you look at the constructions, again, Rembrandt's construction doesn't have any meaning if you just look at the words. They say that it's a protocol -- again, this is a physical layer modulation and physical layer connection. Taking first, then, Rembrandt's construction of physical layer modulation: It is "A protocol that is concerned with establishing the mechanical, electrical, functional, and procedural connection between two communication devices."

First of all, I think functional and procedural is wrong. I don't think that is what their physical layer deals with. I think that is the link layer. So we have that problem. But they have also again broadened this out now again to communication devices. And they have paid no attention to the fact that these are physical layer modulations, which we talked about with the previous term.

:03:22 **When you look up modulation protocols in the**
:03:24 **dictionary, in the technical dictionary, that's talking**
:03:28 **about over a telephone network.**
:03:30 **So you look at their construction. They are**
:03:32 **trying again to broaden physical layer modulations out to**
:03:34 **get away from the telephone network, to even get away from**
:03:38 **the word modems, and they are trying to make these general**
:03:40 **devices. It could be a walkie-talkie, it could be a**
:03:44 **telephone, it could be a fax machine, according to this**
:03:46 **construction. And they have got the construction wrong,**
:03:48 **because it's a functional and procedural -- it won't even**
:03:52 **fit.**
:03:54 **When you look at ours, it comes, again, right**
:03:56 **from the patent. What is a physical layer modulation? It**
:03:58 **is a telephone work or PSTN or cellular standard that**
:04:02 **governs only the establishment of physical layer connections**
:04:04 **between a calling modem and an answering modem. That is**
:04:08 **exactly what it is.**
:04:08 **If we can go back to Slide 31, please.**
:04:12 **This is what we talked about. It is physical**
:04:16 **layer modulation. If we just go to the dictionary,**
:04:18 **modulation protocols tells us, these are, A modem converts**
:04:22 **digital signals generated by the computer into analog**
:04:26 **signals which can be transmitted over an analog telephone**
:04:28 **line. That's what it means to be a modulation protocol. We**

:04:34 **are interpreting now physical layer modulations.**

:04:38 **When you look at the callouts from the patent,**
:04:40 **what are we talking about? The modulation protocols are all**
:04:42 **telephone standards. And they talk about them. The**
:04:46 **physical layer of the OSI model, it's the lowest layer, we**
:04:50 **have covered that. "As is well-known, a variety of**
:04:52 **standards exist which govern the protocols for communication**
:04:56 **between modems," and it cites all those V. standards are**
:05:00 **identifiers of different communication standards recommended**
:05:02 **by the ITU. Column 5, with cellular modem, for example, and**
:05:06 **it gives you another modulation standard, with Column 6, it**
:05:10 **talks about the cellular standards and the V. standards**
:05:14 **again, and with Column 7, this sequence 40, thus,**
:05:16 **synchronizes the modems for communication in accordance with**
:05:20 **same standard or protocol.**

:05:22 **Again, it lists all the V. standards.**

:05:28 **The next slide. The physical layer modulation**
:05:30 **standards are used to establish the physical layer**
:05:32 **connections. These are the terms we are interpreting. It**
:05:36 **tells you in the patent at Column 1, The ITU Standard V.34**
:05:40 **is intended for use in establishing a physical layer**
:05:42 **connection.**

:05:44 **When you look at the definition of physical**
:05:46 **layer connection, again, it's the same sort of thing. Our**
:05:52 **construction comes right from the patent: a connection**

formed between the calling modem and answering modem upon completion of the training and startup, but before any link layer connection is established.

And their construction is physical layer parameters for a connection. Again, that construction, the Rembrandt construction, doesn't even mean anything. Defining physical layer connection as physical layer parameters for a connection actually changes the meaning of the term. It's a physical layer connection. It's not parameters for the connection. So their construction can't be right. And ours comes right from the intrinsic evidence.

If you look at what the intrinsic evidence is on physical layer connection, it says right on Column 6, "Once the modems have synchronized their communication protocol, or modulation standard, then they enter a training and startup sequence 42.

"The completion of this sequence signifies the establishment of a physical layer connection between two modems."

What do we know? We know the physical layer modulation is that modulation standard that you have to choose, and then the physical layer connection is what is established after the modem training and a startup, which it tells you right in the specification.

Next slide.

:07:12 **So we go to Column 6. There is a link layer,**
:07:14 **which is the next level. It tells you in the specification**
:07:18 **the link layer is established after the physical layer**
:07:20 **connection has been established. Right from Column 6 it**
:07:24 **says, "After the physical layer has been established, the**
:07:28 **communicating modems enter the information**
:07:32 **exchange/communication sequence in order to establish the**
:07:34 **link layer connection."**
:07:36 **Let's go to that again. "After the physical**
:07:38 **layer has been established, the...modems will enter the**
:07:44 **information exchange and communication sequence...in order**
:07:46 **to establish the link layer connection."**
:07:48 **Mr. Seitz said in his opening comments there is**
:07:50 **nothing in the intrinsic record that says physical layer**
:07:54 **first then link layer. It is all over the patent. You do**
:07:56 **the physical layer negotiation and establishment of the**
:08:00 **connection first. And then based on that, you have**
:08:04 **established the link layer.**
:08:08 **THE COURT: Excuse me just a second.**
:08:10 **(Pause.)**
:08:36 **We are going to have to interrupt again. Why**
:08:50 **don't you take a minute.**
:08:52 **(Luncheon recess taken.)**
:41:24 **THE COURT: All right, counsel. Let's continue.**
:41:26 **MR. DESMARAIS: Thank you, Your Honor.**

:41:30 **When we broke we were talking about physical**
:41:32 **layer modulation and physical layer connection. Just to go**
:41:36 **over the construction, Rembrandt's proposed construction,**
:41:40 **first of all, it is not helpful because it talks about in**
:41:42 **trying to define physical layer modulation a protocol that**
:41:46 **is concerned with establishing something between two**
:41:50 **communication devices. That is not what a physical layer**
:41:54 **modulation is. A physical layer modulation actually governs**
:41:56 **and controls the connection between the two modems.**
:42:02 **First of all, the word concerned is wrong. It**
:42:04 **is not between two communication devices. It is between a**
:42:06 **calling modem and an answering modem. Then they have got**
:42:08 **the things that it does wrong, mechanical, electrical,**
:42:12 **functional, procedural. Functional and procedural are not**
:42:14 **at this layer.**
:42:16 **Their construction is wrong. Our construction**
:42:18 **comes right from the patent. The definition of modulation**
:42:22 **is protocols over the telephone network, which we will look**
:42:26 **at the dictionary definition. And they are protocols or**
:42:28 **standards that govern the establishment of this connection.**
:42:32 **That's what the whole modulation scheme is.**
:42:34 **If you look at that, if you look up in the**
:42:38 **technical dictionary modulation protocol, it is, in fact, as**
:42:42 **our definition says, a modem converts digital signals**
:42:46 **generated by the computer into analog signals which can be**

:42:50 **transmitted over an analog telephone line. That is the**
:42:52 **definition out of the dictionary. It says, These modulation**
:42:54 **protocols are the specific techniques used to encode the**
:43:00 **digital bits into signals and those are called modulation**
:43:06 **protocols. So it tracks our proposed construction quite**
:43:10 **directly.**
:43:10 **And this is exactly how the term is used in the**
:43:12 **patent specification, and these blackouts show that. The**
:43:14 **patent tells us, when we are dealing with the physical**
:43:18 **layer, as it is well-known, there are a variety of standards**
:43:20 **which exist which govern the protocols for communication**
:43:22 **between the modems. And then it lists those V. television**
:43:26 **standards.**
:43:26 **Later in Column 5 it talks about, with cellular**
:43:28 **modems, they give an example of the other modulation**
:43:32 **standards. At Column 6 they again cite the cellular**
:43:34 **standard and the V. telephone standards. At Column 6,**
:43:38 **later, they say, This sequence 40 synchronizes the modems**
:43:42 **for communication in accordance with same standard or**
:43:44 **protocol.**
:43:46 **So when our definition defines physical layer**
:43:48 **modulation, we define it as a standard or protocol that**
:43:52 **governs the connection between the modems, just like it is**
:43:54 **described in the spec, just like it is described in the**
:43:56 **dictionary.**

:44:00 **Going on to another place in the specification,**
:44:04 **they particular call out this ITU standard: intended for**
:44:06 **use in establishing the physical layer connection, which is**
:44:10 **what the claim term is.**
:44:10 **So the patent couldn't be more clear that it is**
:44:12 **these standards, these telephone or cellular standards that**
:44:16 **govern the connection between the calling and answering**
:44:18 **modem, which tracks our construction directly.**
:44:20 **The next term was physical layer connection.**
:44:24 **The first was physical layer modulation which is the**
:44:26 **standard or protocol that governs the connection, then there**
:44:28 **is the connection. Our proposal is that the connection is**
:44:32 **formed between the calling modem and answering modem upon**
:44:34 **completion of training and startup. And that comes right**
:44:38 **out of the specification. That is what it means, and it is**
:44:40 **before the link layer connection is established. I will**
:44:42 **show you, that is exactly what the patent teaches us.**
:44:44 **Again, if we go to Rembrandt's proposal, first**
:44:50 **of all, it is all wrong, because it is supposed to be the**
:44:52 **physical layer connection, and they describe it as the**
:44:54 **physical layer parameters for the connection. Logically, it**
:44:58 **doesn't even flow.**
:45:00 **So if we look at the patent specification and**
:45:04 **why our construction is correct, it tells us right in the**
:45:06 **specification, essentially defines the term for us, it says,**

:45:10 **The modems enter a training and startup sequence 42. The**
:45:14 **completion of this sequence signifies the establishment of**
:45:18 **the physical layer connection between the two modems.**
:45:20 **It is the completion of the modem training and**
:45:24 **startup that signifies the establishment of the physical**
:45:26 **layer connection. That's what our construction is. It is**
:45:30 **right from the patent. It is essentially an express**
:45:32 **definition.**
:45:32 **We also have in our construction that it comes**
:45:34 **before the link layer connection. The patent specification**
:45:38 **couldn't be more clear. It says it over and over again that**
:45:42 **physical layer connection comes before link layer**
:45:46 **connection. And if you look here at Column 6, after the**
:45:50 **physical layer has been established, afterwards, the**
:45:54 **communicating modems enter the information**
:45:56 **exchange/communication sequence in order to establish the**
:45:58 **link layer connection. It's one and then the other.**
:46:02 **Later at Column 11, the steps for establishing**
:46:04 **an error-correcting protocol, which is the link layer, are**
:46:08 **eliminated and the link layer connection is established**
:46:10 **substantially instantaneously upon the completion of the**
:46:14 **physical layer negotiation.**
:46:18 **Upon completion of the physical layer. Not**
:46:22 **while the physical layer, but after. And that's on and on,**
:46:26 **if you look through the spec cites. In the summary of the**

:46:28 **invention at Column 3, The link layer connection includes**
:46:32 **parameters that are preset to default values based upon the**
:46:36 **negotiated physical layer connection.**
:46:40 **At the completion of the training and startup**
:46:42 **sequence 42, the modems have established a physical layer**
:46:46 **connection and are ready to establish the second layer**
:46:50 **connection, referred to as the link layer connection.**
:46:54 **Clearly, link layer is after the physical layer.**
:46:56 **And they say that's in accordance with the present**
:46:58 **invention.**
:47:00 **The link layer connection follows the physical**
:47:02 **layer connection and uses the physical layer in establishing**
:47:04 **the error-corrected connection.**
:47:08 **So when you look at what is the patent telling**
:47:12 **us these terms mean, what is the intrinsic evidence telling**
:47:14 **us, what do the dictionaries tell us, it tracks our**
:47:18 **construction directly.**
:47:20 **Let me jump back to Slide 34, please.**
:47:24 **The physical layer connection is defined in the**
:47:26 **specification as the "connection formed between the calling**
:47:30 **modem and answering modem upon completion of training and**
:47:32 **startup, before any link layer connection is established."**
:47:36 **So the next term, if we can go ahead, the next**
:47:42 **two terms we have grouped together are then "establishing a**
:47:44 **physical connection" and "establishing a link layer**

connection." The terms are actually longer. Those are the shorthands. You can see them at Claim 1: A method for establishing a link layer connection between a calling modem -- and there is a bunch of words in between -- and an answering modem, and then establishing a physical layer connection between the calling modem and the answering modem.

If you look at the parties' constructions -- I will treat these together. First, if we start with Rembrandt's, again, their construction is not helpful in trying to define these terms. If you look at what they say, establishing a physical layer connection, they say it's applying physical layer parameters for a connection. Then it goes on. It doesn't even explain what it means to be applying parameters. Again, they are getting caught up in this, you know, is it a connection or is it a use of parameters? They do the same thing with establishing the link layer, applying link layer parameters for the link layer.

It doesn't clarify anything. In my view, it makes it actually a little more confusing. They never tell us what those parameters are.

If you look at our construction, it tracks exactly what happened in the patent and exactly what happened in the prosecution history. So: For establishing

:49:04 **a physical layer, the modems use communication techniques**
:49:06 **different from data byte transfer, e.g., different frequency**
:49:12 **tones -- and I will show you, that comes directly out of the**
:49:14 **patent prosecution, where the applicant said exactly those**
:49:16 **words to distinguish the prior art, to negotiate the**
:49:22 **physical layer modulation and then to establish the physical**
:49:24 **layer connection.**
:49:26 **The same down here: connection that is**
:49:26 **established after establishing the physical layer**
:49:30 **connection, without transferring data bytes by using the**
:49:32 **telephone network. Again, right from the specification,**
:49:34 **right from the applicants' own words to distinguish the**
:49:36 **prior art in the prosecution history.**
:49:40 **Let me take you through that.**
:49:42 **First of all, when you, according to the patent,**
:49:46 **in Column 7 and Column 12, the physical and link layer**
:49:50 **connections are established through an exchange of tones, so**
:49:52 **the calling modem and answering modem essentially exchange**
:49:54 **tones between each other. So through the exchange of tones,**
:49:58 **the modems are made aware of the possible shortcuts in**
:50:00 **establishing these connections in the exchange of tones in**
:50:06 **the modem synchronization, sequence 40. You see that in the**
:50:10 **figures that I showed you when we were talking about the**
:50:12 **earlier terms.**
:50:14 **In Figure 4, which is the cellular calling**

:50:16 **modem, and in Figure 5, which is the cellular answering**
:50:18 **modem, it is showing in these boxes that I have marked in**
:50:20 **yellow that they are exchanging tones and those tones are in**
:50:24 **the frequency ranges of the telephone network.**
:50:28 **Then if we go to what happened in the patent**
:50:32 **prosecution, it is very instructive on this particular term.**
:50:34 **The examiner rejected the claims over this**
:50:38 **McGlynn patent. And the examiner said, you know, this**
:50:42 **feature of negotiation may or may not occur, depending upon**
:50:44 **whether or not the modems involved possess nonstandard**
:50:48 **features or if the modulation type or data rate is not as**
:50:52 **specified. Otherwise, standard default features are used,**
:50:54 **without negotiation. Then they reject the patent.**
:50:56 **The applicant comes back and says, emphatically**
:51:00 **and definitively, what their invention is versus McGlynn.**
:51:06 **They have a section entitled, and this is in the response to**
:51:10 **the rejection, they have a section entitled Teaches Away.**
:51:12 **And they say, Not only does McGlynn fail to teach the**
:51:16 **principles of the present invention, but McGlynn**
:51:20 **specifically teaches away from the present invention, as**
:51:22 **noted hereinabove, then they go on, I will skip down to the**
:51:24 **yellow, McGlynn negotiates for features through the transfer**
:51:28 **of data bytes which are not transmitted prior to the**
:51:32 **establishment of physical and link layer connections.**
:51:36 **Down: Furthermore, negotiating for features via**

:51:40 **the use of data byte transfer suggests that the physical**
:51:44 **layer and link layer should be already established before**
:51:48 **any feature negotiation under McGlynn occurs in order to**
:51:52 **enable the transfer of data bytes.**
:51:54 **This is contrary to the present invention. The**
:52:00 **present invention, they are saying that globally now, which**
:52:02 **uses different communication techniques, for example,**
:52:06 **different frequency tones, that is exactly what we put into**
:52:08 **our construction. It's how they characterize the present**
:52:12 **invention to get around the prior art. If they didn't say**
:52:14 **that, they wouldn't even have a patent.**
:52:16 **So we are just trying to hold them to the words**
:52:20 **that they said, to establish the physical and link layer**
:52:22 **connections, since data byte transfer is not yet enabled**
:52:26 **during the establishment of the physical and link layers in**
:52:28 **their invention.**
:52:30 **When you look at our proposed construction, all**
:52:32 **we are doing is using what the applicant said their**
:52:36 **invention was limited to, that they told the Patent Office**
:52:38 **in order to get around the prior art. That is standard**
:52:42 **prosecution history interpretation. If it is clear, it's**
:52:48 **part of the claims. And it couldn't be more clear:**
:52:52 **Contrary to the present invention, which doesn't use data**
:52:56 **byte transfer...**
:52:56 **If you look at our construction, at Slide 41,**

:53:08 **that's what we say: "The modems use communication**
:53:12 **techniques different from data byte transfer, for example,**
:53:14 **different frequency tones," just so there would be no**
:53:16 **argument, we took exactly their words, and then, "to**
:53:20 **negotiate the physical layer modulation and establish the**
:53:24 **physical layer connection."**
:53:24 **We are staying true to the intrinsic record. We**
:53:28 **are holding the patent applicants to exactly how they**
:53:30 **characterized their patent, in contrast to Rembrandt's**
:53:34 **proposed construction, where they ignore the prosecution**
:53:36 **history, they don't pay any attention to what is in the**
:53:38 **patent specification. And they define the terms with words**
:53:42 **that don't explain anything, instead, in fact, broaden the**
:53:46 **meaning about what this invention really was.**
:53:50 **Going onto the next two terms that we grouped**
:53:52 **together, "wherein said physical layer connection is based**
:53:56 **on" and "establishing a link layer connection based upon,"**
:54:00 **the terms are longer, that is why the ellipses are there,**
:54:02 **that is the shorthand. You can see them in Claim 1, where**
:54:06 **they appear. I won't read them. You see them in the blue**
:54:08 **and yellow.**
:54:14 **The proposed constructions, Rembrandt's proposed**
:54:22 **construction of these terms is actually no construction at**
:54:24 **all, because they are just repeating the claim language. If**
:54:26 **you look at what their construction is, they say, "wherein**

:54:30 **the physical layer connection is based on the negotiated**
:54:34 **physical layer modulation chosen from the first and second**
:54:38 **physical layer modulations," those are exactly the words in**
:54:40 **the phrase we are trying to interpret. So it's essentially**
:54:42 **proposing no construction.**
:54:46 **In their second construction for establishing a**
:54:48 **link layer, it is the same problem that we had earlier,**
:54:52 **which is they are talking in terms of applying link layer**
:54:54 **parameters, but they don't tell us what that means.**
:54:58 **Applying parameters is not establishing a connection. So it**
:55:00 **doesn't even define the term.**
:55:02 **In their first construction of the physical**
:55:04 **layer, they just parrot the words in the claim, which is not**
:55:08 **helpful. And in their second construction for establishing**
:55:10 **a link layer, when they actually choose different words,**
:55:14 **they choose words that don't talk about establishing a**
:55:16 **connection. They talk about applying parameters, which is**
:55:18 **not what this invention is, in fact, doing.**
:55:22 **Our construction, as with the others,**
:55:26 **essentially follows the patent specification and the**
:55:30 **prosecution history to really capture what this claim is all**
:55:32 **about.**
:55:34 **To establish the physical layer, we say, the**
:55:36 **"physical layer connection parameters in the calling and**
:55:38 **answering modems default, based on which physical layer**

modulation was chosen in the negotiation, to values that were preset in each modem before the modems communicated."

That is exactly what the claim does, and it's exactly how the invention is described in the patent specification.

Let me take you through that.

So the first point is the claim itself tells us that the physical layer connection is based on a negotiated physical layer modulation. So you have the modulation. And then you base the physical layer connection based on what that modulation is.

The next element, the link layer connection is based upon said negotiated physical layer modulation. So the first thing we note here is the link layer comes second, and it's based upon said negotiated physical layer modulation, which came before, which tracks what we talked about earlier, which is you always do the physical layer and then you do the link layer. That is how it is shown in the claim. And both of them are based on the negotiated physical layer modulation.

Then when you go to the patent specification, that is exactly what they tell us right in the summary of the invention: Another step includes establishing a link layer connection based upon the negotiated physical layer modulation. This link layer connection includes parameters

:56:58 **that are preset to default values based upon the negotiated**
:57:02 **physical layer connection.**
:57:04 **That's the key phrase. That's the phrase that**
:57:06 **is in our construction. It's in the summary of the**
:57:08 **invention. And it's clearly telling us that that's how the**
:57:12 **link layer is established. It's established by presetting**
:57:18 **to default parameters based on what happened at the physical**
:57:22 **layer. It couldn't be more clear. And they said it over**
:57:24 **and over again throughout the specification.**
:57:28 **It's again in Column 7, "In accordance with the**
:57:30 **present invention" -- they don't say preferred embodiment,**
:57:34 **they say, "In accordance with the present invention, set the**
:57:36 **error-correction parameters," that is the link layer, "to**
:57:40 **preset values so as to avoid the necessity of negotiating**
:57:44 **the parameters.**
:57:46 **We see it again in Columns 8 and 11. By making**
:57:50 **certain assumptions, the modem training and startup sequence**
:57:54 **42 may be shortened. "It has been found that most cellular**
:57:56 **connections may transmit at this rate, and certain front-end**
:58:00 **savings may be realized by defaulting to this initial**
:58:02 **startup rate."**
:58:04 **Again, at Column 11: "The modems can default to**
:58:08 **preset values that eliminate the need for probing, ranking,**
:58:12 **and half-duplex training.**
:58:14 **"...during the training and startup sequence 42,**

which results in a much faster connection."

The invention here was to skip the link layer negotiation by defaulting to preset parameters that are chosen based on what you did at the physical layer. So you negotiate the physical layer first, you decide what you are going to do, and then based on what you do there, you default to link layer parameters to establish the connection there.

So that was what the shortcut was. That was the whole invention. We see it all throughout the patent. We see again in Column 11, particularly, the probing and ranking sequences are bypassed and the file parameters are assumed. "...the data call, the LAPM and the full-duplex training parameters are preset to defaults values." Over and over again all the parameters are preset to default values.

Lastly, "At the completion of the training and startup sequence 42, the modems have established a physical layer connection," and then the link layer to establish that we default to preset values, so based upon a means that parameters default to values preset in each modem before the call.

Column 12, we see, "The present invention achieves this by presetting," again, "parameters to default values that are based upon the negotiated physical layer

:59:40 **connection."**

:59:42 **Clearly, we see here the physical layer**
:59:44 **connection is already made. Then you do the link layer.**
:59:46 **And you do it based on what you did in the physical layer**
:59:48 **afterwards by defaulting to preset parameters. It's all**
:59:52 **through the patent specification.**

:59:56 **If we go back to the prosecution history, with**
:59:58 **the transmittal letters going back and forth to the Patent**
:00:02 **Office, and with the responses and responses to amendments**
:00:04 **and argument, if you look at how they were calling their**
:00:06 **invention in the titles of their own documents, they are**
:00:10 **entitled Presetting Link Layer Parameters Per Physical Layer**
:00:14 **Startup. "Presetting Link Layer Parameters Per Physical**
:00:20 **Layer Startup."**

:00:20 **That's what this invention was. That's what the**
:00:22 **patent specification and the prosecution history show. And**
:00:24 **if you look at our construction, Slide 48, that's all our**
:00:30 **construction is.**

:00:32 **On the top right there: establishing a physical**
:00:34 **layer connection based upon the negotiated modulation, we**
:00:38 **construe that as physical layer connection parameters in the**
:00:42 **calling and answering modems default, based on which**
:00:46 **physical layer modulation was chosen in the negotiation, to**
:00:48 **values that were preset in each modem before the modems**
:00:50 **communicated.**

:00:52 **That is the only invention described in the**
:00:54 **specification. It's the only thing this claim element can**
:00:58 **mean. And it's what the prosecution history confirms. And**
:01:00 **it's the same for the link layer. In the link layer**
:01:02 **construction, before the modems can transfer data bytes --**
:01:06 **that comes out of that distinguishing McGlynn -- the link**
:01:08 **layer parameters in the calling and answering modems default**
:01:12 **based on which physical layer modulation was chosen in the**
:01:14 **negotiation to values that were preset in each modem before**
:01:16 **the modems communicated.**
:01:18 **That's what the invention is, and that's the**
:01:20 **only invention described.**
:01:24 **The next term is link layer. You can see where**
:01:28 **it appears in Column 1. Link layer, I think we want to look**
:01:36 **at our proposed construction on the right there. We first**
:01:42 **say it shouldn't be construed separately from the earlier**
:01:44 **phrase. But Rembrandt wanted it construed separately, so we**
:01:48 **proposed an alternate construction there.**
:01:50 **Our construction is: the second lowest layer of**
:01:54 **a communication protocol that performs error-checking**
:01:56 **functions as well as re-transmitting frames that are not**
:02:00 **received correctly.**
:02:02 **Where do we get that? We get that right from**
:02:04 **the patent specification. It's essentially a definition.**
:02:08 **If you look on Column 1, Line 48, the patent clearly says,**

:02:12 **"The data link layer is the second lowest layer of the OSI**
:02:18 **seven-layer model and is provided to perform error-checking**
:02:22 **functions as well as re-transmitting frames that are not**
:02:26 **received correctly."**
:02:26 **Our definition is exactly the definition that**
:02:28 **the applicants provided in the patent specification.**
:02:32 **If we go to Rembrandt's, I am not even sure**
:02:36 **where they got theirs. But it doesn't track the patent**
:02:38 **specification, and it's not a hundred-percent correct.**
:02:44 **If you look at, again, you see here, they are**
:02:50 **defining the link layer as the second lowest layer of the**
:02:54 **OSI seven-layer model, concerned with providing the**
:02:56 **functional and procedural means, and it goes on.**
:03:00 **You remember, in the earlier construction, the**
:03:02 **physical layer, they were saying the physical layer was**
:03:04 **providing the functional and procedural means. They are**
:03:06 **using terms that aren't used in the patent and they are**
:03:08 **mixing up now physical layer and link layer, and they are**
:03:12 **saying they are doing the same thing, which clearly they are**
:03:14 **not.**
:03:16 **Whereas our construction on Slide 58, our**
:03:20 **construction comes right out of the patent: The data link**
:03:22 **layer is the second lowest layer of the OSI seven-layer**
:03:26 **model and is provided to perform error-checking functions as**
:03:30 **well as re-transmitting frames that are not received**

:03:32 **correctly.**

:03:32 **It is an express definition.**

:03:36 **Then we get to the means-plus-function claims,**
:03:44 **"means for establishing a physical layer connection" and**
:03:46 **"means for establishing a link layer connection," and then**
:03:50 **logic for doing both of those things.**

:03:56 **So if we look at Claim 6, we can see where those**
:04:00 **means-plus-function elements appear.**

:04:08 **Did you have a question about something, Your**
:04:10 **Honor? If I can help you answer something...**

:04:14 **THE COURT: No, I am listening.**

:04:18 **MR. DESMARAIS: I thought you were thinking**
:04:20 **about something I was saying.**

:04:22 **THE COURT: No. I am following.**

:04:22 **MR. DESMARAIS: So the means plus function, you**
:04:26 **know, you have to do the function and the structure. So if**
:04:30 **we look at their proposed function, "Establishing a physical**
:04:34 **layer connection between the calling and answering modems,"**
:04:36 **that only takes part of what the actual claim language is.**
:04:38 **If we go back to right there, you see the means for**
:04:42 **establishing a physical layer connection is actually, that**
:04:44 **is quite a long function. And you go back to the**
:04:48 **construction, Page 61, you see Rembrandt hasn't even taken**
:04:52 **the full body of what the function is in the claim language.**

:04:56 **On our side, we take the words that are in the**

:04:58 **claim. Some of them have been defined according to what we**
:05:02 **talked about earlier. You can see on the bullet point**
:05:04 **there, from Claim 1, you see on the Slides 39 to 54, which**
:05:08 **we have already covered, the internal definitions for**
:05:12 **establishing a physical layer. I don't think we need to go**
:05:14 **through that again. It just tracks what we already talked**
:05:16 **about. The same for the next one, which is means for**
:05:20 **establishing a link layer.**
:05:22 **Again, Rembrandt's construction only takes a**
:05:24 **part of the claimed function. Ours takes the full claimed**
:05:28 **function from the claim, interpreting some of the words, as**
:05:30 **we did earlier, as we have already discussed.**
:05:32 **Really, the only thing new here to talk about is**
:05:36 **what is the structure that goes with this claim.**
:05:38 **I think if we look at the construction, there is**
:05:42 **a lot of overlap between the two proposed structures. Now,**
:05:50 **I am talking about the physical layer connection. Both**
:05:52 **sides have said that it is a control processor programmed to**
:05:58 **perform something. So we have, both sides have the control**
:06:00 **processor. Both sides have the calling and answering**
:06:06 **modems. Rembrandt has additionally put in Figure 2 and**
:06:08 **Figure 9. If you look at the things that they have cited**
:06:12 **to, 114, 124 and 120, those are control processors and**
:06:18 **memory devices. So both sides have control processors.**
:06:20 **Both sides have memory devices. Both sides say that the**

:06:24 **control processors are programmed to do something. And both**
:06:28 **sides say that there is a calling modem and an answering**
:06:30 **modem.**
:06:32 **Where do the parties differ then?**
:06:34 **First of all, we add on ours the DSP, and you**
:06:40 **can see here, we say, the "calling of PSTN or cellular modem**
:06:44 **having a DSP."**
:06:46 **Rembrandt leaves the DSP out. I think if you**
:06:48 **look at the patent, it is pretty clear that the DSP belongs**
:06:50 **in there, because if you look at the figures, and it's the**
:06:56 **figure that Rembrandt itself cites here, Figure 9, so both**
:07:04 **sides put in the control processor memory device. But**
:07:08 **Rembrandt leaves out the DSP 112 connected to it. But if**
:07:12 **you look at the figure, the control processor and memory**
:07:16 **device have to connect to the DSP because it is the DSP that**
:07:20 **connects to the MSC.**
:07:22 **The claim element is means for establishing a**
:07:26 **physical layer of connection. You can't establish a**
:07:28 **physical layer of connection without going through the DSP,**
:07:30 **according to Figure 9, which is the figure that Rembrandt**
:07:34 **agrees is part of the construction anyway. It is pretty**
:07:38 **clear from the figure that they cite that you have to put**
:07:40 **the DSP in if you are establishing the physical layer of**
:07:42 **connection.**
:07:42 **The second thing that is interesting between the**

:07:44 **two constructions, we both agree that it's a control**
:07:48 **processor programmed to do something, they say programmed to**
:07:50 **perform the steps of, then they list some steps. We say**
:07:56 **it's a control processor programmed to perform either the**
:07:58 **algorithm described in Figure 4 or Figure 6. So the**
:08:04 **means-plus-function case law is pretty clear that the**
:08:08 **structure that you have to cite in the corresponding**
:08:12 **structure is the structure to perform the function that's**
:08:16 **described in the specification.**
:08:18 **That is the whole point. The claim element here**
:08:22 **is, means for establishing a physical layer connection. The**
:08:24 **patent tells us what the structure is for establishing that**
:08:28 **physical layer connection. And it's a processor programmed**
:08:32 **at the algorithms of Figure 4 and Figure 6. That's what**
:08:36 **those algorithms are used for. So that is the disclosed**
:08:40 **corresponding structure.**
:08:42 **Rembrandt's is not even anything cited in the**
:08:44 **patent. They say it's a control processor programmed to**
:08:48 **perform the steps of identifying and applying a commonly**
:08:50 **supported physical layer communication protocol. Those are**
:08:52 **words that they have made up out of whole cloth. That's not**
:08:56 **from the specification. And they are ignoring the structure**
:08:58 **that was actually described in the specification, which is**
:09:04 **Figures 4 and 6, which, if we look at Figures 4 and 6, they**
:09:14 **are actually entitled, you know, calling modem for cellular,**

Figure 4, answering modem for cellular, Figure 5. And when you go to the descriptions, they are described as the software flow chart illustrating the operation of the present invention when the calling modem is a cellular modem. And Figure 5 is the flowchart for the answering modem. So these are software flow charts. Those are the flowcharts for the software in the processor.

When you go back to the claim element, they are agreeing it is a control processor programmed to perform steps, but then they leave out the very software flowcharts that the whole patent is about.

Why are they doing this? It's the same thing I talked about in the introduction. They don't want the patent claims to cover the invention of the patent because these are software programs for the telephone network. They are trying to broaden out these claims to get away from the telephone algorithms, so they are leaving the disclosed structure out of the means-plus-function corresponding structure. It is against the law. It is against the patent specification. And it's just an attempt to try to capture the cable industry, which these patents don't cover.

They do the same thing with respect to the next term. That was for the physical layer. And if we jump ahead to the link layer, it is the same sort of thing. They have a control processor programmed to perform, and then

they talk about step sort of amorphously, without referring to anything in the patent specification.

They do cite Figures 2 and 9. And you look at our proposed construction, much more specific, it relates to actually what the patent invention was all about. But there is actually something interesting about this claim element. This is the one, means for establishing a link layer. There are no, in this particular patent disclosure, there are, in fact, no software flowcharts or algorithms specifically disclosed for establishing a link layer. There are clearly algorithms specifically disclosed for establishing a physical layer, which we talked about just briefly, those flowcharts 4 through 7.

The patent actually doesn't have any disclosed structure for the link layer. So actually, as a matter of claim construction, these claims are invalid as indefinite under 112 because there is a means-plus-function function, there is control processor, but it is a specific control processor, and they don't disclose the software algorithms. So at a first level, this claim should be invalid as a violation of Section 112.

THE COURT: We will deal with that at a different time.

MR. DESMARAIS: The fallback for that is we have got to then describe what those algorithms were. What we do

:12:08 **in our particular construction for the proposed structure is**
:12:12 **we say it is a control processor, and list the operations of**
:12:16 **the control processor that we get from the specification,**
:12:20 **sort of in words, without being able to cite to any specific**
:12:24 **structure.**
:12:34 **Let's jump ahead to Slide 70. If you look at**
:12:44 **the next collection of terms, it is these "logic for" terms.**
:12:48 **There are two of them. They are analogous to the ones we**
:12:50 **just talked about, which were means for establishing a**
:12:52 **physical layer and means for establishing a link layer.**
:12:56 **These are in a different claim and they are logic for doing**
:13:00 **those same things, so logic for establishing a physical**
:13:02 **layer and logic for establishing a link layer.**
:13:06 **So the first sort of question is, is a "logic**
:13:10 **for" claim element subject to Section 112**
:13:14 **means-plus-function analysis? And we have both briefed this**
:13:18 **issue. Rembrandt's view is no. Our view is clearly yes.**
:13:20 **If you look at the law, there is actually a case**
:13:22 **right out of Delaware here, that I put up on the screen, The**
:13:28 **ABB case v. Slumberger, the presumption that Section 112,**
:13:32 **Paragraph 6 does not apply can be rebutted.**
:13:36 **"Plaintiff asserts that logic does not recite**
:13:38 **specific structure. The Court agrees. The Court finds that**
:13:40 **logic does not recite sufficient structure to avoid**
:13:42 **means-plus-function analysis.**

"Each of the 'logic for' claim limitations in these two patents relate to a processor programmed to perform a specific function. These claim limitations will be construed," according to 112.

It is exactly the phrase we have here, "logic for," it is exactly analogous facts. In that particular case, it was a processor programmed with software.

We actually found, since the briefing, there is actually another case that is particularly relevant here because it was actually a case against Paradyne on this family of patents. It wasn't the patents in this case in particular, but it was the Paradyne patents that Rembrandt bought from Paradyne. And it's entitled Visual Networks v. Paradyne Corporation. The cite is 2005 Westlaw 1411578, from the District of Maryland, decided June 2005. I can hand it up to you if you want.

It says, actually, on a Paradyne patent related to these, there were "logic for" claim terms, and the Court comes out quite clearly, and says, 'Logic for' terms in the computer processor software context like we have here are subject to 112 and get the means-plus-function function structure treatment.

Rembrandt in its brief cites a case, the 3COM case. The 3COM case is not on all fours with what we are talking about here. In that particular case, in those claim

terms, the term logic was talking about electronic circuits or chips. The Court there said, if you are talking about a logic chip, then that's a thing in and of itself, just as if you said computer chip, and it's not a means plus function, distinguishing "logic for" in the context of a processor with software. That is the same thing that the Delaware decision distinguished. So Rembrandt's citing of the 3COM case is not helpful in the context here.

And Rembrandt here agrees that the "logic for" in this case, it is talking about software, not chips. They said as much in their opening presentation. And they said the same thing in their brief. Here are some blowouts from their brief where they said logic as it is used in these claims means computer code and programming, software.

That puts us into the ABB case and the prior Paradyne case and distinguishes us from the 3COM case, which was logic in the form of computer chip.

So once we get beyond the question of is it in fact a means-plus-function type of analysis, which I think the law clearly tells us it is, then we go to the citation of function and structure. And we don't need to repeat it, because this will be the same as the prior terms, which were means for doing the same two things, and the arguments would apply equally.

So here is the claim function for the logic for

establishing the physical layer on Slide 75 is the logic for establishing the link layer. And we don't need to go over that again.

With respect to corresponding structure, it's the same analysis, but the construction is a little bit different, because here we are talking about, with this logic for, we are talking about the computer code. And the computer code or software, as it is disclosed in the patent specification, for establishing physical layer, are those algorithms, those software flowcharts that I showed you in Figure 4 and Figure 6. So that structure would be operating code for implementing either of the algorithms, either of the software algorithms in Figure 4 or Figure 6.

For Rembrandt's part, if you look at their construction, even though it is supposed to be a construction for corresponding structure, they don't cite any structure at all. They say, it's programming that allows a physical layer connection between a calling modem -- you can read through it. They are just parroting the claim language. It doesn't say anything about what the proposed structure is.

The patent describes the software flowcharts in Figure 4 and 6 and actually calls them software flowcharts. If you put up the next slide, Slide 78. That one. You see the description of Figure 4 is a software flowchart, and the

description of Figure 6 is a software flowchart.

So, you know, you look at Rembrandt's construction. They are totally ignoring the structure that is disclosed in the patent itself.

With the next term, the logic for establishing the link layer, we have the same problem that we had with the prior claim element. There is, in fact, no disclosed software algorithm for the logic to establish the link layer.

So these claims, like the prior ones, run afoul of Section 112, because if you have a "means for" analysis you have to have disclosed structure, and they don't. So the claims are invalid.

What we have done in the alternative, if Your Honor doesn't want to go there, is we have, with words, crafted what the appropriate structure would be. But that is not structure that was disclosed in the specification. So that, in fact, renders the claims invalid.

Mr. Seitz cited the Markman that came out of Texas for some of the terms that he likes the Markman for. If we look at that decision with respect to the means for establishing the link layer connection, we see that the Court noted in the decision that the Court couldn't find any structure for this means-plus-function element. And he ordered the parties to do supplemental briefing to see if

:19:28 they could find some. Then, of course, the case came here.

:19:32 So Rembrandt is aware of this problem and has so

:19:36 far not cited any structure. They had the opportunity. The

:19:38 Court in Texas told them this was an issue. Here we are on

:19:42 the briefing and argument here, and they still didn't come

:19:44 up with anything.

:19:46 So that is the first patent.

:19:48 The '761 patent.

:19:54 THE COURT: Did you discuss both, Mr. Seitz?

:19:56 MR. SEITZ: Yes, I did, Your Honor, because they

:19:58 are related.

:20:02 MR. DESMARAIS: The '761 is error control

:20:04 negotiation based on modulation. So you recall in the

:20:08 earlier one we were talking about how you did the link layer

:20:10 based on the modulation. And this just sort of carries on

:20:14 that view.

:20:16 So if we look at the background of the

:20:24 invention, much like we discussed already with respect to

:20:24 the previous patents, they are related, the background of

:20:28 the invention quite clearly says the negotiation of the

:20:30 physical layer is always negotiated before the link layer,

:20:36 always. Unequivocal in that regard.

:20:40 And the specification also tells us the types of

:20:42 error control protocols that they have and that they are

:20:46 dealing with. The patent tells us at Column 1, the types of

:20:48 **error control protocols used today are, LAPM, and then MNP,**
:20:56 **or buffer. Later on in Column 1, "Typically, in negotiating**
:21:00 **the type of error control protocol, a modem tries each type**
:21:04 **of error control protocol in turn. In particular, the modem**
:21:08 **used a negotiation sequence defined herein as LAPM, MNP, or**
:21:14 **buffer."**
:21:14 **What the patent is telling us is that that**
:21:18 **sequence of three things will be tried. First, you try the**
:21:22 **first one. If that doesn't work, you try the next one. If**
:21:24 **that doesn't work, you try the next one. That's what it**
:21:26 **means when it says the negotiation type of error control**
:21:30 **protocol, the modem tries each type of error control**
:21:34 **protocol in turn, and it tells us what they are.**
:21:36 **"This type of negotiation sequence typically**
:21:38 **allows a modem to connect to the widest range of**
:21:40 **industry-available modems."**
:21:42 **Because it doesn't know who it's talking to on**
:21:44 **the other side, so it tries one. If the other side can't**
:21:46 **speak that one, it tries the next one. If it can't speak**
:21:50 **that one, it keeps going until it gets one, or it goes to**
:21:54 **buffer or it shuts down.**
:21:56 **A characteristic of this kind of equipment was**
:21:58 **that the rate, when you negotiate the line rate, for the**
:22:02 **physical layer, could lead to an inability to get the error**
:22:06 **layer that you want. So what you see here in Column 1, as a**

:22:10 **result, a modem may erroneously connect at too high a line**
:22:14 **rate. And this affects the time it takes to perform the**
:22:18 **subsequent error control negotiation.**
:22:20 **So in severe cases, the time delay in**
:22:22 **negotiating the error control protocol will be so long that**
:22:24 **neither the LAPM nor the MNP is negotiated, causing the**
:22:30 **modem to fall back to buffer method.**
:22:34 **They are talking about why do you need a**
:22:34 **sequence and what is going to happen in the real world when**
:22:38 **you try to negotiate these things. Sometimes you just**
:22:40 **disconnect. And we will talk about that a little later.**
:22:44 **So the solution that the patent came up with was**
:22:46 **an observation about the dial-up modems, the telephone**
:22:50 **modems of the time. And what the inventor said, this is how**
:22:54 **the summary of the invention starts: However, I have**
:22:58 **realized a solution that solves all of the above problems**
:23:02 **and is user-friendly. I have observed that almost every**
:23:06 **high-speed modem, then he cites the three telephone modem**
:23:12 **standards of the time, has an LAPM modem and that LAPM modem**
:23:16 **is enabled. Further, only in low-speed modems --**
:23:26 **THE COURT: Why don't you complete your thought.**
:23:28 **MR. DESMARAIS: -- only in low-speed modems, or**
:23:32 **the other telephone standards, are MNP-only and non-error**
:23:36 **control.**
:23:36 **And finally, the modulation of the physical**

:23:38 **layer is always negotiated before the error control**
:23:42 **protocol, link layer.**
:23:44 **THE COURT: Okay. I need to interrupt again, if**
:23:46 **you don't mind.**
:23:48 **MR. DESMARAIS: Sure.**
:23:50 **THE COURT: Thank you.**
:33:50 **(Recess taken.)**
:33:50 **THE COURT: Counsel, let's resume our Markman.**
:34:30 **MR. DESMARAIS: Let's jump to Slide 9, please.**
:34:38 **There is three groups of terms for this patent,**
:34:40 **the first, second, and third, the binder has tabs directing**
:34:44 **to the construction. So we looked at the first one, "error**
:34:48 **control negotiation sequence," that appears in Claim 1 and**
:34:52 **Claim 9, the proposed constructions.**
:34:56 **Now, again, if we look at Rembrandt's proposed**
:35:04 **construction for error control negotiation sequence, it is**
:35:08 **not really, not really helpful. It is like the others. It**
:35:14 **sort of broadens things out, but doesn't actually tell us**
:35:18 **what it is doing. It talks about a sequence of approaches.**
:35:20 **"Approaches" is nowhere in the patent specification. I am**
:35:22 **not even sure what they mean, because they don't say. What**
:35:26 **they say is, "...approaches that a communication device may**
:35:28 **employ concerning transmission errors."**
:35:30 **What does that mean, really? Are they fixing**
:35:32 **the errors? Are they detecting the errors? What are they**

:35:36 **doing with the errors?**

:35:36 **You look at their construction and they sort of**
:35:38 **broaden it out from what the patent tells us an error**
:35:42 **control negotiation sequence is.**

:35:42 **The patent tells us exactly what an error**
:35:46 **control negotiation sequence is. And that's what you see in**
:35:50 **our construction. It's a sequence of different types of**
:35:52 **error control protocols or a disconnection step that the**
:35:56 **equipment attempts to use in turn, such that when an attempt**
:36:00 **to use one such protocol fails, the next option in the**
:36:04 **sequence is tried.**

:36:04 **That comes right out of the patent**
:36:06 **specification. And the patent specification is actually**
:36:08 **very clear on this particular term. If we could go to Slide**
:36:12 **13, right in the summary of the invention, they tell us, "In**
:36:16 **particular, the modem has at least two type of error control**
:36:20 **negotiation sequences," so that is exactly the claim term,**
:36:24 **"to select from." LAPM or disconnect is one sequence, and**
:36:28 **LAPM, MNP or buffer is the other sequence. That is the only**
:36:34 **two the patent discusses. If you look down in Figure 2,**
:36:38 **they essentially define it again in Box 315, they say, "Use**
:36:40 **LAPM or disconnect as the error control negotiation**
:36:46 **sequence." And in Box 320, they say, "Use LAPM, MNP, or**
:36:52 **buffer as the error control negotiation sequence."**

:36:54 **And then they tell us in the background of the**

:36:56 **invention in Column 1, "The types of error control protocols**
:37:00 **used today are," and they list those same things.**
:37:02 **"Typically, in negotiating the type of error**
:37:04 **control protocol a modem tries each type of error control**
:37:08 **protocol in turn."**
:37:12 **Then we see that that all throughout the**
:37:14 **specification. They have give us a description here at**
:37:16 **Column 1, Line 24: "In this negotiation sequence, the modem**
:37:20 **attempts," then it talks about the first one. "...the modem**
:37:24 **then tries," then talks about the next one. "If this too is**
:37:26 **unsuccessful, the modem then falls back to a non-error**
:37:30 **control mode or the buffer mode of operation. This type of**
:37:34 **negotiation sequence typically allows a modem to connect to**
:37:36 **the widest range of industry-available modems."**
:37:40 **It is using sequence in its every-day, normal**
:37:42 **English sense. If you look in the dictionary, sequence is:**
:37:44 **The order of things, or the order in which things are**
:37:48 **arranged. And that's exactly how the patent uses it. "In**
:37:52 **negotiation of the type of error control protocol a modem**
:37:56 **tries each type of error control protocol in turn."**
:38:02 **So it's the normal, every-day parlance of the**
:38:04 **word sequence.**
:38:06 **The '761 intrinsic record never refers to**
:38:08 **approaches, which is the word used in Rembrandt's**
:38:12 **construction in connection with error control negotiation**

:38:14 **sequence, but instead defines them as a sequence of the**
:38:18 **types of error control protocols, which is the words we use**
:38:20 **in our construction.**
:38:22 **It says here in Column 1, "...the modem uses a**
:38:26 **negotiation sequence defined herein as LAPM, MNP, or**
:38:30 **buffer," which are protocols.**
:38:32 **Then the summary of the invention, "In**
:38:32 **particular, the modem has at least two type of error control**
:38:36 **negotiation sequences," then it lists them again. Those**
:38:40 **are, in fact, protocols.**
:38:44 **Rembrandt comes to Claim 2 and 10, which are**
:38:48 **dependent claims, and says you can't read protocols and**
:38:50 **sequences into the independent claim because it says in**
:38:54 **these claims that they are going to have error control**
:38:58 **negotiation sequences. But if you look at what the claims**
:39:00 **actually say, they further modify the independent claims by**
:39:04 **saying, you are then going to: including the further step**
:39:08 **of negotiating the error control of the data connection in**
:39:12 **the far-end data communication equipment in accordance with**
:39:16 **the selected one of the number of error control negotiation**
:39:18 **sequences.**
:39:18 **So in the independent claim you have done the**
:39:22 **selecting of the error control negotiation sequence, and in**
:39:26 **the dependent claim you are going to then proceed in**
:39:28 **accordance with that error control negotiation sequence. So**

:39:30 they are not at all limiting of our construction.

:39:34 If you go back to what our construction actually

:39:38 says, on Slide 12, it's exactly what the patent describes

:39:44 for error control negotiation sequence. It is "a sequence

:39:48 of different types of error control protocols," which is

:39:50 those things listed in the patent specification, "or a

:39:54 disconnection step that the equipment attempts to use in

:39:58 turn," which is exactly what they tell us the sequence is in

:40:00 the patent, "such that when an attempt to use one such

:40:04 protocol fails, the next option in the sequence is tried."

:40:06 It is in the intrinsic record. It is a plain,

:40:10 ordinary English definition of sequence.

:40:12 You look at Rembrandt's, they don't actually

:40:14 tell us anything. In fact, it makes it broader. They say

:40:16 it is a sequence of approaches. But they don't say

:40:18 approaches for what. They just say approaches that a

:40:22 communication device may employ concerning transmission

:40:24 errors. They don't even tell you what that means. They are

:40:28 not telling you whether it is detecting errors or correcting

:40:30 errors or fixing errors. So it is, in fact, no definition

:40:32 at all.

:40:38 The next set of terms, on Slide 19, are these

:40:44 two sort of long terms. I will show them in the context of

:40:48 the claim. "To determine a set of parameters for the

:40:52 physical layer of the data connection with the far-end data

communications equipment," that's one term. And the other term is, "Selecting one of a number of error control negotiation sequences as a function of a value of at least one parameter from the set of parameters for the physical layer."

So we will treat those two together, because they are related.

If we look at the proposed construction for the selecting term, Rembrandt proposes, "...selection an error control negotiation sequence based upon the value of at least one parameter associated with the physical layer."

Essentially, they are using the claim language, but actually giving us no real construction.

We say that, "after negotiating the physical layer and determining the physical layer parameters, using the value of at least one determined physical layer parameter to select one of multiple link layer error control negotiation sequences."

You see, the difference is, we are making it clear that you determine the physical layer parameters first, and then you use at least one of those to select among multiple possible error control negotiation sequences, which is exactly what the patent is about. It is exactly what is described in the specification. And Rembrandt leaves those two concepts out of the claim construction,

which the claim language itself requires.

The flip of this term is the next one. That is why we are treating them together. This one is determining the physical layer parameters. It's the flip of the one we just talked about. Here, for our construction, "before negotiating an error control, the negotiated physical layer standard is used to determine the physical layer parameters of the data connection."

So first you do the physical layers and then you do the error control. One is the flip of the other.

Rembrandt's construction, on the other hand, is "to identify a set of parameters to be used for the physical layer of the data connection between the two communication devices."

So again, they broaden out communication devices, and they have a construction that doesn't actually define anything. Ours states that you have to determine the physical layer parameters before the error control negotiation, and it's done using physical layer parameters, which is exactly what the patent is all about. And you can see that if you look at the next slide. The claim itself, the way it is structured, says in the first element, "...to determine a set of parameters," which is what we have in our construction, "for the physical layer of the data connection," and then in the next element, "as a function of

:43:36 **a value of at least one parameter from the set of parameters**
:43:40 **for the physical layer."**
:43:42 **It is clearly the antecedent for value, and from**
:43:44 **a set of parameters is what happened above in the physical**
:43:50 **layer, where you have determined that set of parameters.**
:43:54 **And, of course, the Federal Circuit law is pretty clear on**
:43:58 **this point. You have to stay true to the sequence or the**
:44:00 **order that is performed in the claims or described in the**
:44:02 **specification.**
:44:04 **And this is a common theme with Rembrandt's**
:44:08 **proposals, to try to get away from this sequencing of**
:44:12 **physical layer then link layer. We saw it in a couple**
:44:16 **earlier claims.**
:44:18 **So I think, for Your Honor's benefit, once you**
:44:20 **decide this issue, it travels through a lot of the claims**
:44:22 **and it travels through this claim construction as well.**
:44:26 **So we look at the specification. The**
:44:28 **specification, just like the claim, couldn't be more clear.**
:44:32 **If you look at Column 1, Line 9, it says emphatically, "The**
:44:36 **negotiation of the physical layer is always negotiated**
:44:38 **before the link layer." And if you look at the summary --**
:44:44 **THE COURT: Counsel, hold up just a second.**
:44:50 **(Pause.)**
:45:10 **THE COURT: Continue on, counsel.**
:45:14 **MR. DESMARAIS: It says in the background of the**

invention, "The negotiation of the physical layer is always negotiated before the link layer." It says it again in the summary of the invention. So it is not just background. "Finally, the modulation physical layer is always negotiated before the error control protocol link layer."

It is in the figures. If you look at Box 305, "negotiate the physical link," and then you go down and it's not until Box 315 and 320 where you are then using the error control negotiation sequences.

It's all through the detailed description. So it's in the summary of the invention, it's in the figures, and it's even in the detailed description of the patent, where they talk about the specific method, "As known in the art, CPU 110 first negotiates with the far-end modem the physical layer of the data connection."

"After negotiation of the physical layer."

"If the value of the negotiated parameter is greater than or equal to the predefined value."

"On the other hand, if the value of the negotiated parameter is less than the predefined value, CPU 110 uses an LAPM, MNP or buffer error control negotiation sequence."

In the background they tell us it is physical layer then link layer. In the summary of the invention they tell us physical then link. In the figures they do it. And

even in the detailed description they do it. It is all throughout the patent.

This patent is related to the earlier patent we just talked about, the '631. It is all through the '631 patent as well. Physical layer, then link layer. And it even made it into the prosecution history. During the prosecution history, the examiner rejected the '761 over Sridhar's patent. And in response to the rejection, the applicant says, "In fact, Sridhar, et al. teach that all the link layer negotiations are performed prior to the negotiation of the physical layer."

That is the reverse of our situation.

"The applicant submits that Sridhar, et al. teach the direct opposite steps or element functions as defined in the claims as amended." It is also in the patent prosecution.

To get around the Sridhar patent, they tell the Patent Office, our patent does the steps in reverse of Sridhar. And Sridhar did link layer then physical. The patent in this case is physical, and then link layer.

Rembrandt's argument that the physical layer is only negotiated before the error control negotiation, not before the selection, conflicts with the very claim language that we are interpreting. If you look at the claim language, the way it is structured, you negotiate the

physical layer. You determine a set of parameters based on that negotiation. Then you select one of a number of error control negotiation sequences as a function of a value of one of the parameters that you have already finished selecting.

So the claim language itself tells us that the antecedent for value and set of parameters are the parameters from the physical layer that you had to have already determined.

Again, it's in the figures. We talked about this already. You negotiate the physical link at the top of the flow diagram in Figure 2. And down at the bottom, you are using the error control negotiation sequences that you have already selected.

So if we go back to the claim construction, Slide 21, our constructions track the claim language, exactly the claim language, the specification, the prosecution history. "After negotiating the physical layer and determining the physical layer parameters, using the value of at least one determined physical layer parameter to select one of multiple link layer error control negotiation sequences." It is supported by the intrinsic evidence, the only thing supported by it.

Rembrandt's proposal doesn't define anything, in fact, broadens out the very claim terms that we are trying

:49:06 **to define.**

:49:08 **Slide 22, it is exactly the same thing. Our**
:49:10 **construction, "before negotiating an error control, the**
:49:12 **negotiated physical layer standard is used to determine the**
:49:14 **physical layer parameters of the data connection." That is**
:49:18 **exactly what the applicant told the Patent Office to get**
:49:22 **this patent around the prior art. That is exactly what the**
:49:24 **specification describes, in the background, in the summary**
:49:26 **of the invention, and in the detailed description. There is**
:49:28 **no other method disclosed in the patent.**

:49:30 **If you look at Rembrandt's, again, they are**
:49:32 **broadening it out and trying to ignore the intrinsic record,**
:49:34 **trying to ignore the patent prosecution.**

:49:38 **So those are those terms.**

:49:40 **The last terms for this patent are "physical**
:49:42 **layer of a data connection" and "error control." You can**
:49:46 **see those in Claim 1. They are also in Claim 9.**

:49:54 **If we take a look at the proposed constructions,**
:49:58 **as with Rembrandt's earlier constructions, they have the**
:50:00 **same clause with these, which I won't belabor. They define**
:50:04 **establishing a connection with choosing parameters, which,**
:50:08 **the connection is more than that. They talk about**
:50:12 **associating with the physical layer, which doesn't actually**
:50:16 **tell you what is going on. And they talk about approaches**
:50:20 **concerning error transmissions. And again, that doesn't**

:50:22 **tell you -- the patent never uses approaches when it is**
:50:26 **talking about error control. You know, approaches to error**
:50:28 **control doesn't tell you anything about what the element is**
:50:32 **doing. It doesn't tell you if it is just finding errors.**
:50:34 **It doesn't tell you if it is just fixing errors. It doesn't**
:50:38 **tell you what it is doing.**
:50:38 **What Rembrandt is doing throughout these**
:50:42 **constructions is trying to define the words with amorphous**
:50:46 **terms which don't mean anything to broaden out the**
:50:48 **invention. Whereas our construction is common, as we**
:50:50 **already discussed repeatedly, right out of the intrinsic**
:50:54 **evidence.**
:50:54 **Rembrandt complains because the standards and**
:51:00 **the protocols that were in the specification are defined by**
:51:02 **the date. But that's standard in this type of claim, where**
:51:08 **there is protocols and standards described in the**
:51:10 **specification, especially in this case, where the Patent**
:51:12 **Office relied on it to issue the patent.**
:51:16 **If you look in the patent, it is, of course,**
:51:18 **from May 31, 1995, and defines the error control protocols,**
:51:22 **the LAPM, the MNP, and the buffer. Of course, those are the**
:51:26 **protocols as of 1995 when the patent was filed. The same**
:51:30 **with the telephone standards that we have been talking**
:51:32 **about. All these V. standards were at the time of this**
:51:36 **patent in 1995 the issued standards at that time.**

:51:42 **How can we be sure that that is really what the**
:51:44 **patent was talking about? It came up in the patent**
:51:46 **prosecution, where the examiner objected to the patent and**
:51:48 **said, your patent is talking about all these standards and**
:51:52 **protocols. You know, what is the date of these standards**
:51:56 **and protocols for the sufficiency of your disclosure for**
:52:00 **what you are trying to teach here as the invention?**
:52:02 **Rembrandt comes back and says, the applicable**
:52:12 **date of the cited protocols and standards is the filing date**
:52:16 **of the present application, which is May 1995.**
:52:20 **So, of course, when you are looking at what is**
:52:22 **the disclosure, what does it support, how are we going**
:52:26 **interpret what they told us in the patent specification,**
:52:30 **with all these telephone standards and protocols, they told**
:52:32 **the Patent Office it is the issued versions as of 1995 when**
:52:36 **this patent was issued. And that's the only thing that**
:52:38 **makes sense, frankly. Otherwise, it would be a continually**
:52:40 **evolving patent specification.**
:52:42 **The Schering v. Amgen case is on point with**
:52:46 **respect to this point, where the patent talked about one of**
:52:50 **the interferons, IFN. And the Court of Appeals for the**
:52:54 **Federal Circuit said, we have to freeze what it meant to be**
:52:58 **an interferon as of the time of that patent application.**
:53:00 **Otherwise, we have got a continually evolving invention**
:53:06 **here, clearly beyond the purview of what the inventors had**

:53:08 in mind. That is the prevailing law, and that's the way
:53:10 these patents should be interpreted.
:53:12 THE COURT: Thank you, Mr. Desmarais.
:53:14 If I could beg counsel's indulgence for an
:53:18 additional time, to allow the lawyers from the other case to
:53:20 substitute themselves at counsel table.
:53:22 (Recess taken.)
:57:12 THE COURT: Mr. Seitz, did you want an
:57:14 opportunity to reply.
:57:16 MR. SEITZ: Just a couple of points, because I
:57:18 know time is precious.
:57:20 THE COURT: I had a question for you at the
:57:22 outset. Is the plaintiff, in fact, arguing, Mr. Seitz, that
:57:34 the error control can occur before the negotiation of the
:57:36 physical layer, the physical layer negotiation?
:57:40 MR. SEITZ: We are arguing that it can occur at
:57:42 the same time. I think this is one of the points that needs
:57:44 clarification.
:57:48 I think the point is, they are confusing
:57:50 negotiating the link layer with establishing the link layer.
:57:54 And they are confusing that as well at the physical layer
:57:58 level. The physical layer does not need to be established
:58:00 before the link layer can be, the negotiation can be
:58:06 dispensed with and the link layer agreed with.
:58:08 So there is a distinction between negotiating,

:58:12 **when you determine the modulation of the physical layer, and**
:58:16 **then establishing the link layer -- let me back up.**
:58:20 **There is a difference between negotiating the**
:58:24 **modulation at the physical layer, and then determining the**
:58:28 **link layer based upon that, versus establishing, actually**
:58:34 **making the physical layer connection and then making the**
:58:38 **link layer connection.**
:58:38 **As the patent said, and I think we had a callout**
:58:42 **in the specification that said, it could be done**
:58:44 **substantially simultaneously.**
:58:46 **So I think that is where the confusion might**
:58:48 **lie.**
:58:48 **I have just a couple more points to clarify as**
:58:50 **well.**
:58:52 **In McGlynn, back to that McGlynn reference, and**
:58:56 **the data bytes that we have some dispute over, their**
:59:02 **interpretation is that no data bytes can be transferred**
:59:06 **while the physical and link layer negotiations are going on.**
:59:08 **That's what they are saying. That is what the limitation is**
:59:12 **they are trying to impose. It doesn't make sense. If there**
:59:14 **is a negotiation occurring, there is an exchange of data**
:59:18 **points that's going on. They have to be exchanging**
:59:22 **something in order to establish these connections.**
:59:26 **So what they mean is user data bytes, not data**
:59:30 **bytes that are being exchanged.**

:59:32 **You will see, if you look at the McGlynn**
:59:36 **reference, Your Honor, "user data bytes will be exchanged at**
:59:38 **layers above the physical layer and the link layer," and**
:59:42 **that is why in McGlynn, they said, this is talking about**
:59:46 **features that are being established after the physical layer**
:59:48 **and link layer are established.**
:59:50 **So their definition can't work because there has**
:59:52 **to be an exchange of data bytes in order to establish the**
:59:56 **physical layer and the link layer.**
:00:00 **The dictionary definitions they rely on. Well,**
:00:04 **if you look in a telecom dictionary, I don't know if Your**
:00:08 **Honor noticed, but if you look in a telecom dictionary, you**
:00:12 **are going to find telecom definitions. If you were to look**
:00:14 **broader, which one skilled in the art might, for instance,**
:00:18 **here, you are going to find broader definitions than what**
:00:22 **they propose.**
:00:22 **Here is really the core of it. I think the**
:00:26 **Court has been presented with a pretty stark choice here.**
:00:30 **That is, they are saying, this is all telephones because the**
:00:34 **specification dealt with telephones for the most part --**
:00:36 **that's what they are saying -- and therefore, that should be**
:00:38 **a limitation of the claims as to telephones.**
:00:42 **Well, if we could look at Slide 5, please.**
:00:48 **That's not what the law says about patents. It**
:00:52 **doesn't say that because it applies in one area of**

:00:54 technology that it cannot apply in another.

:00:58 For instance, this is a perfect case, this
:01:00 SuperGuide Corp. case, which talks about regularly received
:01:04 TV signals applies to both analog and digital signals.
:01:10 Well, the claim wasn't limited, and even though the digital
:01:14 signals came after the analog signals, the Federal Circuit
:01:16 was clear that it can apply to both because the claim
:01:20 language was not so limited.

:01:22 Here is just an easy way to look at this, Your
:01:24 Honor. I mean, when the apple fell on Newton's head and
:01:28 Newton said, "Gravity," and then Newton figured out it also
:01:32 applies to the Sun and the Moon and the stars, well, if you
:01:36 accept their interpretation, gravity is limited to an apple
:01:40 falling on your head. It can never be applied broader than
:01:46 the apple falling on your head.

:01:46 And that's not what the patent system is about.
:01:50 The Federal Circuit is clear that just because you have a
:01:54 patent that deals with one industry, or the telephone, it
:01:58 doesn't mean that it cannot be applied broader.

:02:02 We showed you the callouts in the specification
:02:04 which Mr. Desmarais did not show you and tried to
:02:08 distinguish, which showed how broad it was. I don't know if
:02:10 Your Honor remembers, it was early, and there was a lot of
:02:12 interruptions. But we showed you those callouts which said,
:02:16 it deals with data transmission, including cellular,

:02:20 **including telephones.**

:02:22 **The purpose of the invention was for data**
:02:24 **transmission over a variety of mediums.**

:02:28 **Again, you are presented with a very stark**
:02:32 **choice here: Do you limit this to telephones, even though**
:02:34 **the specification says it's for a variety of mediums? Do**
:02:38 **you import the examples that are used, that are telephony**
:02:42 **examples, in the specification to limit the claims? That's**
:02:46 **what they want you to do. We say it's improper. We say the**
:02:50 **specification supports broader than telephony and there is**
:02:54 **no reason to write telephony standards and protocols into**
:02:58 **these claims.**

:03:00 **Thank you.**

:03:00 **THE COURT: So we are going to go to the next**
:03:04 **patent.**

:03:04 **MR. DESMARAIS: Your Honor, two points?**

:03:06 **THE COURT: Briefly.**

:03:06 **MR. DESMARAIS: I want to point out two things.**
:03:08 **One is, on the link layer versus physical layer. If you**
:03:16 **just look at what the patent says -- and I showed this in**
:03:20 **the presentation, let me show this one slide -- it is not**
:03:22 **just talking about the modulation. The link layer**
:03:24 **connection follows the physical layer connection and uses**
:03:30 **the physical layer in establishing the error corrected**
:03:32 **connection.**

:03:34 **That is what the patent says. They are trying**
:03:36 **to slice and dice and say --**
:03:38 **THE COURT: That's taken from the claim?**
:03:40 **MR. DESMARAIS: No. Column 11, Lines 32 to 35.**
:03:44 **When you are looking at the order of things,**
:03:46 **when you actually read the patent, it is clear over and over**
:03:48 **again, physical layer, then link layer. In fact, it says**
:03:52 **"always" at a couple places in the specification.**
:03:54 **So what they are trying to do is run away from**
:03:58 **that. This is the thing where they distinguished in**
:04:02 **prosecution Sridhar and said, no, we are the opposite. We**
:04:06 **are physical layer and then link layer.**
:04:08 **So the specification says it over and over**
:04:10 **again, and to get the patent out of the Patent Office, they**
:04:14 **said physical layer, then link layer. That's what they told**
:04:16 **the Patent Office to get around Sridhar.**
:04:18 **Similarly with the second point Mr. Seitz made,**
:04:20 **which is with respect to this, there have to be data bytes**
:04:24 **exchanged to establish these connections, so our**
:04:28 **construction is wrong because you have to have it. That is**
:04:30 **true in our products. That's how our products work. That**
:04:34 **is not true in the patent, because the patent was a**
:04:36 **telephone patent.**
:04:36 **What they exchanged in the patent to establish**
:04:40 **connection was tones. They exchanged frequency tones, not**

:04:44 **data bytes.**

:04:46 **First of all, that is all through the patent.**
:04:48 **But this is what the patent applicant said with respect to**
:04:52 **the McGlynn reference. This is the patent applicant's own**
:04:56 **words to the Patent Office to get the patent issued: "This**
:04:58 **is contrary to the" -- he is talking about data bytes.**
:05:04 **"Furthermore, negotiating the features via the use of data**
:05:10 **byte transfer suggests that the physical layer and link**
:05:12 **layer should already be established before any speech**
:05:16 **negotiation under McGlynn, in order to enable the transfer**
:05:20 **of data bytes. This is contrary to the present invention,**
:05:22 **which uses different communication techniques, for example,**
:05:26 **frequency tones."**

:05:28 **That's what I am saying when I am talking about**
:05:28 **they are trying to run away from what they told the Patent**
:05:32 **Office and what the patent did. In their invention, to**
:05:36 **establish these connections, one modem sent a tone to the**
:05:38 **other modem of a particular frequency. The receiving modem**
:05:44 **sent the tone back, and they went back and forth exchanging**
:05:46 **tones, just like they told the Patent Office.**

:05:48 **They weren't exchanging data bytes. In the**
:05:52 **cable modems that our products use, we don't do tones. We**
:05:56 **exchange data bytes. They told the Patent Office they did**
:06:02 **tones and not data bytes.**

:06:04 **Rembrandt is trying to run away from that and**

broaden these claims. They are ignoring the intrinsic record. They are ignoring what their invention was. And they are running away from the things they told the Patent Office to get the patent in the first place.

THE COURT: Mr. Seitz, I will give you a real short reply to those two points if you would like.

MR. SEITZ: Again, very short.

They were talking about user data bytes there, not the data bytes that are transferred. And just because you exchange tones does not mean that you do not exchange data bytes.

THE COURT: Okay. We are going to the '444 patent next.

MR. ROZENDAAL: The '858, I believe.

THE COURT: Just give me a short minute as you get yourself ready.

(Recess taken.)

THE COURT: All right, then.

MR. ROZENDAAL: If it please the Court, the '858 patent, we call this the multiple access packet channels patent, that is a term that comes from the patent itself. And it indicates that multiple modems, multiple data sources, can share a portion of the bandwidth, a portion of the communication line.

The problem that the patent is directed to is

how multiple data sources can share a common transmission line. There are a variety of technical --

THE COURT: Counsel, remind me of your name for the record.

MR. ROZENDAAL: J.C. Rozendaal, Your Honor.

Okay. There are a variety of technical solutions to that problem. The different data sources can use different frequency, for example.

The type of sharing that is of interest in this patent is called time division multiplexing, which basically means that each data source takes a turn. They take turns using the communications line and they don't try to use it at the same instant.

Time division multiplexing was developed historically for use with data sources that sends data at regular intervals. And the classic example of that would be a traditional circuit switch telephone call. Although it sounds to the human ear as if there is a completely continuous connection between two people speaking on the phone, in fact, the sound is chopped up into small slices, and a tiny bit is sent several hundreds or thousands of times a second, little bits of conversation are sent. And that allows 20 or 30 different conversations to be carried sort of one right after the other along a common communications line.

:11:16 **That kind of data, where the data is sent at**
:11:20 **regular intervals, is called synchronous data, meaning it**
:11:24 **comes regularly. Synchronous data sources can efficiently**
:11:28 **share a TDM line. They just take turns. Here we just have**
:11:32 **an example of one phone gets a chance to use the line and**
:11:36 **the next one and the next one and the next one. It is very**
:11:40 **efficient. It is a highly efficient way to use the**
:11:42 **communications line because there is no space. They are**
:11:46 **constantly pumping out data at a known rate, and they take**
:11:48 **turns using the line.**
:11:50 **The problem arises when this time division**
:11:54 **multiplex system, the time slots, the division of the line**
:11:58 **into time slots, is used with data that comes in fits and**
:12:02 **starts. If you have bursts of data, which is to say**
:12:06 **asynchronous data, then you have a problem of using the bus**
:12:08 **efficiently if the time slots are rigidly assigned to**
:12:12 **particular data sources.**
:12:14 **So whereas before it was efficient to have the**
:12:18 **illustrated data sources take turns and sort of go 1-2-3,**
:12:22 **1-2-3, one after the other, here we have a situation where**
:12:26 **we have the orange modem has a lot of data to send and the**
:12:30 **purple modem at the moment doesn't have any data to send.**
:12:34 **And if the slots are rigidly assigned to one after the**
:12:36 **other, we will have a situation where the purple modem slots**
:12:40 **go unused while there is a traffic jam at the orange modem.**

And so it's to avoid that problem that it's desirable to find a way to assign the time slots to a group of modems flexibly, so that they can take turns and the slots are not rigidly assigned to one particular modem, or one particular set of programs within a modem.

Now, there are a couple of different ways that you can achieve this flexible sharing. Older technology used what is referred to as a central packet manager to aggregate the data from multiple sources and synchronize the passing of the data to the TDM bus. Imagine a traffic cop who stands at the intersection of the communications line and decides which data source will get to use the line at any given moment. The '858 patent has a slightly more sophisticated, more efficient way of handling it, in which some of the features of the central packet manager are delegated, are localized, at the individual packet data sources.

So if we take Figure 3 of the patent, which illustrates -- here we have synchronous application modules, at least the telephones or cellular applications that generate data at regular intervals, they are using the time division multiplexed bus 204. We also have packet application modules, which have bursty data, have data that comes in fits and starts. They are connected to the same bus. Instead of having a central traffic cop handle which

:14:28 **one of these packet application modules is going to use the**
:14:32 **bus, some of those functions are delegated to a packet**
:14:34 **manager, which is located at the packet application source.**
:14:40 **I would note for a moment that, just as a**
:14:42 **preview, Mr. Desmarais said, quite correctly, that our**
:14:50 **understanding of how this patent works is you have data**
:14:54 **sources that are located in different locations that are**
:14:56 **hooked up to a time division multiplexed bus that travels**
:14:58 **over in some cases considerable distances. His counter to**
:15:02 **that was to show a picture of a particular piece of**
:15:06 **equipment manufactured by Paradyne Corporation back in the**
:15:08 **1990s. And if there is one thing that is clear about patent**
:15:14 **law -- I realize there are a lot of gray areas in the law --**
:15:16 **if there is one thing that is very clear, it is that one**
:15:20 **cannot interpret the claims of the patent based on the**
:15:22 **features of a product made by the company the inventor**
:15:22 **happened to be working for at the time the patent was issued**
:15:24 **or applied for. That is sort of the worst possible kind of**
:15:28 **extrinsic evidence to look at when construing the claims.**
:15:32 **The patent is very clear that two functions are**
:15:36 **carried on locally in this patent. Aggregating the packet**
:15:40 **data, that means, if there is a traffic jam, if there is a**
:15:42 **backup of data that needs to be sent on the bus, that will**
:15:46 **be stored locally. It will not be sent to a central**
:15:50 **location with all the other data and stored in a common**

place.

And the patent tells us that synchronizing packet data to the TDM bus. So sending the data up at the right time into time slots is something that can be handled locally rather than on a centralized basis. That doesn't mean that there is no more central packet manager of any kind in the system. There could be centralized functions for network control or other types of functions that are done centrally. But these two functions, the patent tells us, can be done locally.

Here we see the invention applied. This is Figure 5 of the patent. We have what the patent calls the multiple access packet channel. So this is a set of time slots on the bus. These frames are repeating frames. There is time slot 1, time slot 2, time slot 3, time slot 4, time slot 5, time slot 6. Those first six ones are going to be assigned to a group of packet data sources. So one group of modems is going to share those six slots.

Then there is going to be, right next-door, another set of slots. So over here we are going to have 7, 8, 9, 10, and so on. Those are going to be allocated to some other set of data sources. Those could be packet data sources. Those could be synchronous data sources. Slots 1 through 6 in this example are going to be shared by some group of packet data sources.

:17:18 **As we see here, we have these three modems on**
:17:24 **the right trying to share this set of time slots. Instead**
:17:26 **of rigidly assigning slot 1 to the first modem, slot 2 to**
:17:32 **the second modem, slot 3 to the third modem, and so forth,**
:17:34 **we see here is an example where the blue modem is occupying**
:17:40 **all six slots for a series of frames until it is finished**
:17:42 **sending its packet. Then the slot becomes available for the**
:17:46 **other modems.**
:17:48 **So you could have, in this example, the orange**
:17:50 **modem can sends a packet when it's done and the blue modem**
:17:54 **gets a turn to use all the time slots, it is not just**
:17:56 **limited to just one time slot or two time slots. And then**
:18:00 **when it is done the purple modem can take it over and start**
:18:02 **using that set of time slots.**
:18:04 **As I mentioned a moment ago, the patent is clear**
:18:06 **that this system of flexibly assigning a group of time slots**
:18:08 **to a group of modems can be replicated for other time slots**
:18:12 **on the same communications line. So right next-door, we**
:18:16 **have slots 1, 2, 3, 4, 5, 6. If we keep going, 7, 8, 9, 10,**
:18:22 **11, 12. The patent tells us, for example, time slots 7**
:18:26 **through 12 could be assigned to a second group of modems, a**
:18:28 **second group of packet applications.**
:18:34 **So some sets of time slots are allocated to**
:18:38 **packet data. Some slots may be used for synchronous data.**
:18:42 **To summarize just the main elements, the main**

:18:46 **outlines of the invention as they are shown in the claim,**
:18:48 **you have to have a time division multiplexed bus. You have**
:18:50 **to have a plurality of packet data sources. And you have to**
:18:54 **have a distributed packet manager within each of the packet**
:19:00 **data sources which is configured to allocate access to the**
:19:04 **bus.**

:19:06 **That is the basic outline of the claims.**

:19:10 **With that, I think we can dive into the disputed**
:19:12 **claim terms, unless the Court has questions.**

:19:16 **Rembrandt has requested the Court to construe 11**
:19:18 **claim terms in this patent. The defendants for their part**
:19:22 **have requested construction of 26 terms. That leads to an**
:19:26 **awful lot of claim terms to be construed. And because we**
:19:30 **have a limited amount of time and a lot of material to**
:19:34 **cover, we are not going to attempt to address all 20 or**
:19:40 **30-some-odd claim terms here today. We, of course, are**
:19:42 **happy to answer any questions the Court has about any of the**
:19:44 **terms addressed in the briefs. But we are going to try to**
:19:48 **focus on the main points of dispute or what we think are the**
:19:50 **most salient points in dispute, walking through Claim 1 in**
:19:54 **order and seeing how they appear in the claim.**

:19:58 **What we will see as we walk through the claim,**
:20:00 **there are at least four main points of dispute. The**
:20:02 **defendants try to, as we have already heard, limit the**
:20:06 **invention to a single device that you can drop on your foot,**

rather than a system including multiple devices.

They try to require that synchronous data can never be sent in packets, so they are going to be playing around with the definition of packet data, synchronous data.

They try to require that various aspects of the invention be fixed at startup and never changed, which is not required by the claims. And they are going to try to exclude the use of a centralized packet manager for any purpose at all.

So, starting with Claim 1, the first words of the claim are "data communications apparatus comprising a time division multiplexed bus." And the defendants wants to construe the words "data communications apparatus" and "bus."

Rembrandt submits that the term data communications apparatus doesn't require any construction and that the jury will be able to understand what data communications apparatus means without further elucidation from the Court.

We have proposed here, if another set of words is needed, we would suggest "data communications equipment." This is something where there may be a typographical error or some further development since the joint claim chart was submitted to the Court. I believe this says "data communications device" in the claim chart. We would prefer

:21:32 "equipment" because equipment, like apparatus, can be
:21:36 singular or plural. But that's really a detail. We don't
:21:40 think it needs any construction at all.
:21:42 For their part, the defendants try to construe
:21:44 the term data communications apparatus as network access
:21:50 unit. It is interesting that the words network access unit
:21:54 don't appear anywhere in the claim. And it's in order to
:21:58 try to limit the claims to a single device that they
:22:02 interpret the words data communications apparatus as a
:22:06 network access unit, which they think has certain
:22:08 properties.
:22:10 What the communications apparatus does is, of
:22:14 course, described in the remainder of the claim. And it is
:22:16 not necessary or appropriate in court to come to the network
:22:20 access unit at this point at the outset of the claims to
:22:24 limit what happens later.
:22:26 Similarly, bus, we don't think, requires any
:22:30 construction. A bus is simply a transmission path. To the
:22:34 extent that a construction is needed, it would suffice to
:22:40 define it as one or more conductors that are used as a path
:22:44 for transmitting information from any one of several sources
:22:48 to any of several destinations. That is a commonly accepted
:22:50 use of the term bus in the computer field, as distinguished
:22:54 from, for example, the transportation field.
:22:58 The defendants again want to use this term to

:23:02 **limit the concept to hardware lines that are within a single**
:23:06 **device and used for data transfer among the components of a**
:23:08 **single device.**
:23:10 **As we will see, that is simply not a restriction**
:23:14 **that is warranted either by the patent itself or by the**
:23:16 **common understanding of those terms in the art.**
:23:32 **I am trying not to repeat the points I have**
:23:34 **already made here. I think the main issue is data**
:23:38 **communication apparatus is clearly something broader than**
:23:40 **network access unit, that it does more than simply manage**
:23:44 **the flow of data between a local communications network and**
:23:46 **a network facility. In fact, everything that the data**
:23:50 **apparatus does is defined in the remainder of Claim 1, and**
:23:54 **the term apparatus isn't limited to a single device.**
:23:58 **Significantly, when we look at Figure 3, which**
:24:02 **describes the layout of the one embodiment of the invention,**
:24:06 **during prosecution, the patent examiner cited prior art**
:24:12 **against this application that involved nodes of the**
:24:18 **communications network. So the patent examiner himself**
:24:22 **thought that what was described in the patent applied to a**
:24:24 **system distributed over a wide area and not necessarily**
:24:26 **something that was confined to a single box.**
:24:30 **Incidentally, even if one were to understand the**
:24:34 **preferred embodiment as being limited to a single box, it**
:24:36 **would not be appropriate to import that limitation into the**

:24:38 **claim.**

:24:40 **Either way, there is no basis for limiting the**
:24:42 **concept of a data communications apparatus to a single**
:24:44 **device.**

:24:46 **Similarly, bus commonly refers to transmission**
:24:50 **paths between devices as well as transmission paths within a**
:24:54 **device. We have a picture up here of a universal serial bus**
:24:58 **which is commonly used to connect computers to printers.**
:25:02 **Your Honor probably has a bus like that in your office**
:25:04 **chambers somewhere. An Ethernet bus is commonly used to**
:25:08 **connect computers to one another. Again, as I mentioned**
:25:10 **earlier, the examiner during prosecution cited art that**
:25:14 **referred to a TDM bus used to connect nodes of a**
:25:18 **communications network rather than to connect the components**
:25:20 **of a single device.**

:25:22 **Indeed, the defendants themselves have patents**
:25:24 **in which they use the term bus to refer to a connection**
:25:28 **between devices rather than as a connection within a single**
:25:32 **device. The example we give here, also cited in the brief,**
:25:36 **is Motorola's Patent 5,382,841.**

:25:42 **So for all those reasons, we don't think we**
:25:44 **should be limited to a box that you can drop on your foot.**

:25:48 **Next we come to the concept of a time division**
:25:50 **multiplexed bus. Time division multiplexing, basically,**
:26:02 **means that the data sources take turns using the bus and**

:26:06 **they don't use the bus at exactly the same instant in time.**
:26:10 **We have attempted to capture that in our definition. The**
:26:14 **defendants, again, and this is something that we have seen**
:26:18 **repeatedly in their proposed constructions, they are often**
:26:22 **very close and it may look like the differences between**
:26:24 **their constructions and our constructions are not that**
:26:28 **great. But they are subtly adding elements that it can**
:26:34 **safely be assumed they think will help them avoid**
:26:36 **infringement arguments down the road.**
:26:38 **Here we have a time division multiplexed bus,**
:26:42 **instead of being one that's partitioned into time slots for**
:26:46 **people, where devices take turns using the bus. They want**
:26:50 **it to be one defined to be used in the same way during each**
:26:54 **repetition, and they want it to be one whereby only one data**
:26:58 **source can successfully transmit over the bus at any one**
:27:00 **discrete interval of time.**
:27:02 **Well, it is contrary to the invention to require**
:27:04 **that they be defined to be used in the same way during each**
:27:08 **repetition, because, as we saw, the idea of the invention,**
:27:12 **one of the innovative features of the invention is to allow**
:27:14 **the slots to be flexibly assigned to different data sources**
:27:20 **rather than be assigned to the same data source every time**
:27:22 **they are repeated.**
:27:24 **Similarly, there is an ambiguity here about what**
:27:26 **them with regard to at any one discrete interval of time.**

:27:30 **Certainly, one can define any one discrete interval of time,**
:27:34 **and it is possible to have one data point use the line**
:27:36 **within any given interval as long as they are not trying at**
:27:40 **exactly the same moment to use the bus.**
:27:42 **I think perhaps this may have been some**
:27:46 **infelicity that resulted when they tried to adopt a version**
:27:48 **of the Texas Court's construction, but in the translation**
:27:52 **the meaning was altered in a way that makes it problematic.**
:27:58 **So, to illustrate, again, from Figure 5 of the**
:28:02 **patent, what we see here is that instead of being assigned**
:28:06 **rigidly to use slot 1 for the same device every time, there**
:28:10 **is a flexible assignment so that in the first frame, slot 1**
:28:14 **is assigned to the orange modem and the second frame blue,**
:28:18 **then blue again. Same thing with slot 3, we have blue and**
:28:22 **purple. So it is not used the same way each time. Nor is**
:28:24 **it the case that even within a time slot it is necessary**
:28:28 **that only one data source can use the line here. Here we**
:28:30 **have an example of time slot 4 where in principal two**
:28:34 **different data sources can use the same time slot. It is a**
:28:34 **brief interval of time.**
:28:40 **Also here at the end, a single time slot in**
:28:42 **which two data sources can be sent at a discrete interval of**
:28:46 **time. If what they mean by no two data sources in a**
:28:50 **discrete interval of time, they can't be two in the same**
:28:54 **time slot. We don't think that is supported by the**

:28:56 **specification.**

:28:56 **Okay. Now we get to the portion of the**
:28:58 **bandwidth allotted to packet data. This is an instance**
:29:02 **where, I think, when the Court looks at the joint claim**
:29:06 **chart, there are three or four different terms that are**
:29:08 **packed into this one phrase. There is a portion of the**
:29:12 **bandwidth. There is a portion of the bandwidth allotted to**
:29:16 **packet data. There is packet data. It seems there is some**
:29:20 **redundancy that could be avoided here. But we will take**
:29:22 **them in turn.**

:29:24 **We start with packet data. The defendants**
:29:28 **propose that it should mean data that travels in packets,**
:29:32 **which is fine as far as it goes, except, we have two**
:29:36 **objections to that. The first is that the patent itself**
:29:38 **defines packet data as variable bit rate data, as we will**
:29:42 **see in just a moment. And the second objection we have is**
:29:46 **that the defendants then want synchronous data to be defined**
:29:50 **in such a way that it cannot travel in packets. And that's**
:29:52 **a problem, because, in fact, either synchronous or**
:29:56 **asynchronous data could be packetized.**

:30:00 **Data traveling in packets is essentially like**
:30:02 **putting data in an envelope and writing an address on the**
:30:06 **envelope for the destination and the network where the**
:30:08 **information should be sent. Whereas before, in the**
:30:12 **traditional old-fashioned telephone network, a dedicated**

:30:16 **path was created between two end points of a communication,**
:30:20 **in packetized data. It's like sending a letter. You**
:30:22 **address the packets. You say where it wants to go. You**
:30:26 **dump all the information onto the network. And the network**
:30:28 **will route the packets to their destination. It is not**
:30:30 **required that all the packets take the same path through the**
:30:32 **network to reach the destination.**
:30:36 **So that kind of data can be asynchronous and**
:30:38 **often is. It could also be synchronous. We object to the**
:30:42 **defendants' attempt to exclude synchronous data from being**
:30:46 **carried in packets.**
:30:46 **The specification says, it says there are**
:30:50 **synchronous data, and also there is variable bit rate data**
:30:56 **such as frame relay hereinafter referred to as packet data.**
:30:58 **So the packet data is defined in the specification as**
:31:02 **variable bit rate data. And the aspect of packet data that**
:31:06 **is relevant to the invention is not that they are carried in**
:31:08 **these packets or envelopes. It is that they come in fits**
:31:12 **and starts, is that they are bursty. That is what causes**
:31:14 **the problem that the invention is designed to solve.**
:31:20 **And that's why we think it should be defined as**
:31:24 **variable bit rate data.**
:31:26 **Okay. We then talk about the portion of the**
:31:28 **bandwidth allotted to packet data. Again, we think this**
:31:36 **means that some of the bandwidth is used for packet data.**

:31:38 **We don't think that this requires any additional**
:31:42 **construction. And when we say plain meaning, we don't mean**
:31:44 **no meaning. We mean that the jury can read that and**
:31:46 **understand what it means.**
:31:50 **But they, again, take this opportunity, the**
:31:52 **defendants take this opportunity to add additional**
:31:54 **limitations. They want it to be a portion of the TDM data**
:32:00 **transfer capacity, which is fixed at initialization, in**
:32:04 **which all packet data from some packet data sources that**
:32:08 **share it must travel, and in which only such packet data may**
:32:12 **travel.**
:32:12 **Again, this is another theme that we will see in**
:32:16 **the defendants' construction. They take a "may" and they**
:32:18 **turn it into a "must." They take a "could be" and they turn**
:32:22 **it into a "has to be." So, yes, maybe you set this up at**
:32:26 **initialization. Maybe you change it later. It doesn't have**
:32:28 **to be fixed forever at initialization. Maybe all the packet**
:32:32 **data from a set of modems doesn't travel in these channels**
:32:34 **but maybe some of it doesn't. Maybe only packet data from**
:32:38 **certain modems travels there. But maybe those are flexibly**
:32:42 **assigned, too.**
:32:44 **So they take particular aspects of an example**
:32:46 **given in the specification and they try to set them in**
:32:48 **concrete as requirements for all possible embodiments of the**
:32:52 **invention.**

:32:54 **That's the error of that construction.**

:32:58 **By the way, this is a point we can perhaps clarify. If by fixed they don't really mean fixed, if they mean set up at initialization and subject to being changed later, maybe that is not a problem. But fixed to us means fixed and you can't change it. And that would be objectionable.**

:33:18 **The claim does not require that anything be fixed forever at initialization.**

:33:24 **They take an example from the specification in which there is an allocation that happens during startup, and they say, oh, so allocation has to always happen during startup. But nothing prevents an alteration of the allocation of bandwidth after startup. In fact, the specification says that one of the advantages of the invention is the ability to quickly grow simply by adding additional packet application modules.**

:33:52 **So basically, you can add additional modems to the system without having to go through the problem you had in the prior art of then having to have a bigger, more complicated central packet manager. It stands to reason that when you add more modems to the system, it will be necessary to allocate bandwidth differently than it was originally allocated at system initialization.**

:34:18 **Then we get to portion. Again, it really seems**

like the jury can figure out what a portion is. To the extent that portion has to be construed, it just means at least some of the bandwidth. Historically, again, time division multiplexing was used for synchronous data, so you had regular data coming at regular intervals. And this is an invention that says, here is an efficient way to use a portion of the bandwidth, to use at least some of the bandwidth for packet data, for asynchronous data, for data that comes in fits and starts.

The defendants, by trying to make this a fixed amount and insisting that it has to be less than the whole, are essentially trying to change what the claim says to write the word "only" right here, where only a portion or only some of the bandwidth is allotted a packet data. That restriction isn't found anywhere in the claim. And in principle, one could use all the time slots for packet data. There is nothing that prevents that, at least on the face of the patent.

Then we come down to the distributed packet manager. Again, this is a situation where there are statements in the specification that are close to this in describing certain disclosed embodiments. But they don't represent absolute limitations that have to be imposed on every possible embodiment.

So here again, the distributed packet manager,

:35:58 **it's very clear from the specification, the distributed**
:36:00 **packet manager has to do two functions. It has to aggregate**
:36:04 **the data. In other words, if there is a traffic jam, if**
:36:08 **there is a lot of data waiting to get on the line, it has to**
:36:12 **be held locally at the distributed packet manager, and it**
:36:14 **has to synchronize the data being sent to the bus. In other**
:36:16 **words, rather than sending all the data to a central**
:36:20 **location, the data can be sent from different locations onto**
:36:22 **the bus without losing synchronization.**

:36:24 **Here we have an illustration from the packet.**
:36:28 **Figure 1 shows one version of a prior art system in which**
:36:34 **you will see the difference here, there is a central packet**
:36:36 **manager, which is hooked up to the bus, and the packet data**
:36:40 **sources, instead of being hooked directly to the bus,**
:36:44 **instead of being hooked directly to the bus, the packet data**
:36:48 **sources are hooked over to the central packet manager and**
:36:50 **only the packet manager is hooked up to the TDM bus.**

:36:54 **So all of the packets, all of the data from all**
:36:56 **of the different packet applications gets sent to one place**
:37:00 **where they have to be stored and synchronized under the bus.**

:37:06 **Here, in Figure 3, which discloses one**
:37:10 **embodiment of the present invention, the packet application**
:37:12 **modules are hooked directly to the bus and there is a**
:37:16 **distributed packet manager that handles synchronizing packet**
:37:20 **data and aggregating the packet data.**

:37:22 **So those are the two features that are expressly called out as having to be done locally. It doesn't mean that there isn't a central packet manager somewhere.**

:37:30 **What we expect the defendants to say later on is, well, you know, yes, we have distributed packet managers that handle aggregation, they handle synchronization, each modem can be directed directly to the bus without sending its data to a central point. But we also have a central packet manager and we need it for some things. And therefore, we can't infringe, if the claim is defined in such a way that a central packet manager can't be needed for anything.**

:37:58 **Also, they add the requirement that the distributed packet managers have to communicate with other packet data sources when allocating access.**

:38:08 **This last bullet point here. Again, this is a requirement from their definition, their proposed construction, "communicate with other packet data sources," that is simply not found anywhere in the claim. Although there is an embodiment where that happens, it's not necessary. You could have, for example, as in the Ethernet system that I mentioned earlier, you could have all the data sources listen to where there was an opening in the line and then take advantage of the opening without conferring with each other about whether they were going to try it. If**

there was a collision, then they would just take turns later on. Or you could have them check a bulletin board to see when the next opening is going to be. They don't have to talk directly to one another.

Again, these are subtle aspects of one disclosed embodiment that the defendants are trying to engraft into the claims where they don't belong.

All right. So we made it through Claim 1. There are a couple of other terms from some later claims that I would like to try to cover. In Claim 7, we see the term synchronous data sources. This comes back to the fight about packet data versus synchronous data. As I said earlier, the aspect of packetized data that was of interest to the inventor was the fact that it had a variable bit rate. The aspect of synchronous data that is of interest is that it has a constant bit rate.

The defendants want to define synchronous data to mean data sent synchronously through time division multiplexing without packetization. And there is simply no reason to exclude from the definition of synchronous data that travels in packets.

Our construction is consistent with what the Court in Texas as did. And I think the defendants will not be able to point to a requirement that synchronized data not be in packets. In fact, I would expect that their own

:40:14 **systems have packetized data, some of which is sent**
:40:16 **asynchronously, in bursts, and some of which, for example,**
:40:20 **for telephone calls, is sent at regular intervals but the**
:40:22 **data is carried in packets.**
:40:26 **So there. We made it through the '858. We have**
:40:30 **again, as with the other patent, put together a summary**
:40:34 **slide, which I won't go through in detail now, but which**
:40:38 **indicates the main limitations that the defendants have**
:40:40 **attempted to add to the claims, shows which claims are at**
:40:42 **issue and which claim terms on the joint claim chart are**
:40:46 **affected by the limitation.**
:40:48 **THE COURT: Thank you, counsel.**
:41:08 **MR. DESMARAIS: May I approach?**
:41:10 **THE COURT: Yes, sir.**
:41:30 **MR. DESMARAIS: Slide 3, please.**
:41:32 **So the '858 patent is directed to what's called**
:41:34 **a network access unit that interfaces with a local network**
:41:40 **facility. If you look at how they describe the invention,**
:41:46 **the entire patent is about the network access unit. Figure**
:41:52 **3 is an illustrative block diagram about it. You have seen**
:41:56 **that a few times. You see it labeled 200 NAU. That is the**
:42:00 **network access unit. It says in the background of the**
:42:04 **invention, Communications equipment -- that should say**
:42:08 **known, that is a typo, "Communications equipment known as a**
:42:10 **network access unit, NAU." So the patent itself is telling**

:42:12 **you when it uses communications equipment it is talking**
:42:16 **about the network access unit. What this NAU does is it**
:42:20 **messages the flow of data between the local communications**
:42:24 **network and a network facility in both directions.**
:42:28 **The patent makes a distinction, this picks up on**
:42:30 **the last point counsel were talking about, it makes a**
:42:34 **distinction between synchronous data and packet data.**
:42:38 **I think it's important, the way the patent sets**
:42:40 **this up, and we will get to it when we get to that term.**
:42:44 **But the distinction here is they are saying synchronous data**
:42:48 **versus packet data. And those are two different things.**
:42:52 **Why are they saying that? Synchronous data is telephone.**
:42:54 **Packet data is data.**
:42:56 **So they are saying to provide the most**
:42:58 **flexibility, it is preferable that you support two types of**
:43:02 **data, synchronous data and packet data.**
:43:04 **What Rembrandt wants to do is say that**
:43:08 **synchronous data can be packet data, too. That's what you**
:43:12 **just heard on their construction: Well, it can be**
:43:14 **synchronous, but it can be packetized.**
:43:16 **The patent is telling you, there is a difference**
:43:18 **between synchronous data on the one hand and packet data on**
:43:22 **the other hand.**
:43:24 **And yet Rembrandt is trying to tell you, well,**
:43:28 **if it is synchronous data, it can be packetized as well.**

:43:30 **Well, then, what is the patent talking about? Just like all**
:43:34 **their other instructions, again, they are proposing**
:43:36 **constructions that get away from what the patent is teaching**
:43:38 **us. It is clearly telling us we got synchronous on the one**
:43:42 **hand and packetized on the other. You can't have**
:43:44 **synchronous data that is packetized. It doesn't even make**
:43:46 **any sense.**

:43:48 **They set up the NAU so that you have packet**
:43:52 **application modules to deal with the packet data and**
:43:54 **synchronous application modules to deal with the synchronous**
:43:58 **data. If the synchronous data can be packetized, you just**
:44:02 **have a packet module. You wouldn't need a synchronous**
:44:04 **module.**

:44:06 **When you step back and you look at what they are**
:44:08 **actually trying to solve here, it is contrary to everything**
:44:12 **that is in these patent specifications.**

:44:14 **Now, the patent goes on to tell us about these**
:44:18 **modules, for example, each module or circuit board, using**
:44:20 **the phrases module and circuit board interchangeably, and it**
:44:24 **talks about how it's set up. The synchronous application**
:44:28 **modules couple synchronous data, not shown, telephone**
:44:32 **equipment, to the NAM via the TDM bus, which is known in the**
:44:36 **art.**

:44:38 **In contrast to that synchronous type of data,**
:44:42 **each of the plurality of packet application modules, coupled**

:44:46 **packet data equipment not shown, for example, a data**
:44:50 **terminal, to the TDM bus 204 and the packet manager is**
:44:54 **eliminated.**

:44:54 **Again, they are contrasting something called**
:44:56 **synchronous data from something called packet data. Yet**
:45:00 **Rembrandt wants to do away with that contrast and say,**
:45:02 **network synchronous data can be packet data, too.**

:45:06 **Again, that just doesn't make sense in the**
:45:08 **context of the invention here.**

:45:10 **Again, if we jump to Slide 7, you see here one**
:45:14 **of the other things they are trying to do is they are trying**
:45:16 **to put the packet manager back in, when it says quite**
:45:20 **clearly in the patent, "In accordance with the inventive**
:45:24 **concept...the packet manager is eliminated." Indeed, the**
:45:30 **function of the packet manager is now distributed among the**
:45:32 **various packet application modules that created the need for**
:45:34 **it in the first place.**

:45:36 **And yet you just heard Rembrandt's**
:45:38 **constructions. And Rembrandt says, it's okay if they have a**
:45:42 **packet manager, even though the whole point of the invention**
:45:48 **here was to do away with the packet manager.**

:45:52 **So again, they take their invention and they**
:45:56 **propose constructions that totally get away from the**
:46:00 **inventive concept that is in the patent.**

:46:02 **You heard them talk about claim construction,**

:46:06 **sort of the law, what are we supposed to be doing. You**
:46:12 **know, we are not supposed to be interpreting claims in a way**
:46:14 **that makes a new invention. We are supposed to be**
:46:18 **interpreting the claims to capture what the invention is in**
:46:22 **the claim as described in the specification, as argued to**
:46:24 **the Patent Office during prosecution history. We are not**
:46:26 **supposed to be interpreting these things in a broad way with**
:46:30 **blinders on that sort of ignores the patent specification**
:46:32 **and ignores unequivocal statements about what is and is not**
:46:36 **the invention.**

:46:36 **What is synchronous data versus packet data? If**
:46:40 **your inventive concept eliminates the packet manager, then**
:46:44 **you can't be reading the packet manager back into the**
:46:46 **claims. That is fundamental claim construction law as well.**
:46:50 **We have to look at what Rembrandt is really trying to do**
:46:52 **here.**

:46:56 **Let's jump to Slide 11. There are a bunch of**
:47:00 **terms here in this patent that counsel just went through.**
:47:04 **Again, we have set it up with a tab on one side and that**
:47:06 **follows with the tabs on the binders. I will try to go**
:47:10 **through these with some dispatch.**

:47:14 **The first one, please. The data communications**
:47:18 **apparatus and related terms. You can see that in Claim 1,**
:47:22 **data communications apparatus. If we look at the**
:47:26 **constructions, we can see Rembrandt says "a data**

:47:30 **communication device." I think they just changed that now**
:47:34 **on the fly to say they want to call it data communications**
:47:38 **equipment. That is because of the point that I made sort of**
:47:42 **in my opening comments, which is, you know, what they**
:47:44 **patented here with this network access unit is one piece of**
:47:48 **equipment.**
:47:48 **THE COURT: I am take counsel at his word there**
:47:50 **was a typo.**
:47:56 **MR. DESMARAIS: I am saying the reason they**
:47:56 **don't like the word device, what I am trying to explain, the**
:48:00 **reason --**
:48:00 **THE COURT: I know what you are trying to**
:48:02 **explain. Mr. Seitz indicated that that was a mistake in the**
:48:06 **presentation. I think that's what he said.**
:48:08 **MR. DESMARAIS: The device --**
:48:12 **THE COURT: Counsel, Mr. Seitz -- Mr. Rozendaal?**
:48:14 **MR. ROZENDAAL: Your Honor, we would prefer**
:48:18 **"equipment" there instead of "device." The error was in the**
:48:22 **chart that was submitted to the Court. There should have**
:48:24 **been a change there that was not accurately recorded. I**
:48:28 **apologize for not being clear about that.**
:48:30 **MR. DESMARAIS: I misunderstood there. I**
:48:32 **thought you were asking me. I am sorry. Device was in the**
:48:34 **claim charts. It was what we briefed. They changed it for**
:48:38 **the purposes of the presentation to "equipment."**

:48:40 **The reason that Rembrandt doesn't want device is because they want to be able to read this claim on the cable network, houses connected --**

:48:52 **THE COURT: I sort of got that point by now, counsel.**

:48:56 **MR. DESMARAIS: When you look at how the patent is actually written...**

:48:58 **THE COURT: Excuse me, counsel.**

:49:04 **(Recess taken.)**

:49:04 **(Court recessed for the day.)**

:49:04 **- - -**

:49:04 **Reporter: Kevin Maurer**